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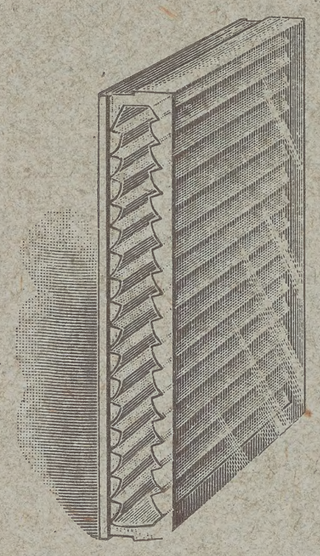

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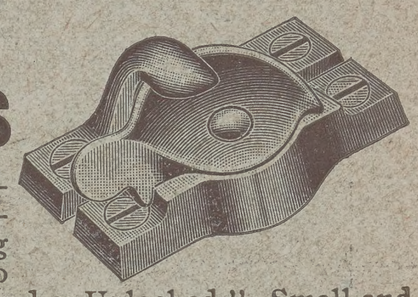

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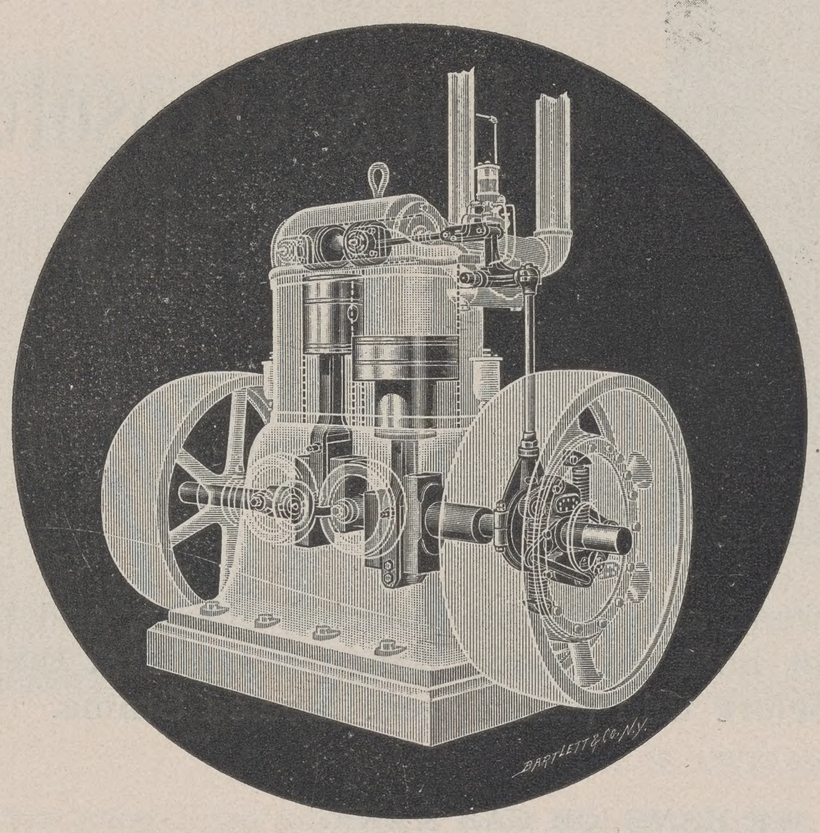

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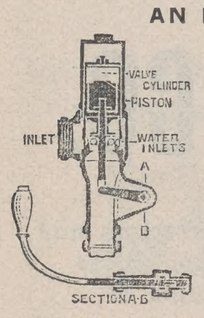

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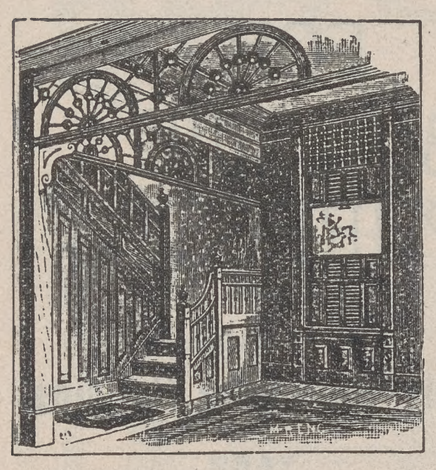

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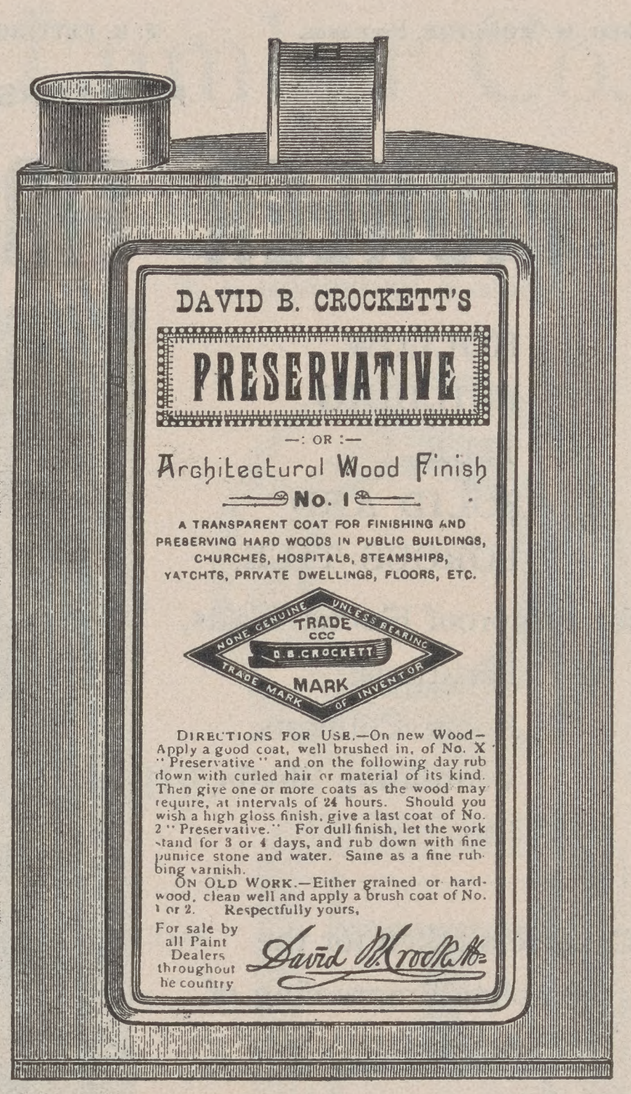
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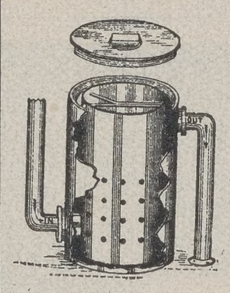

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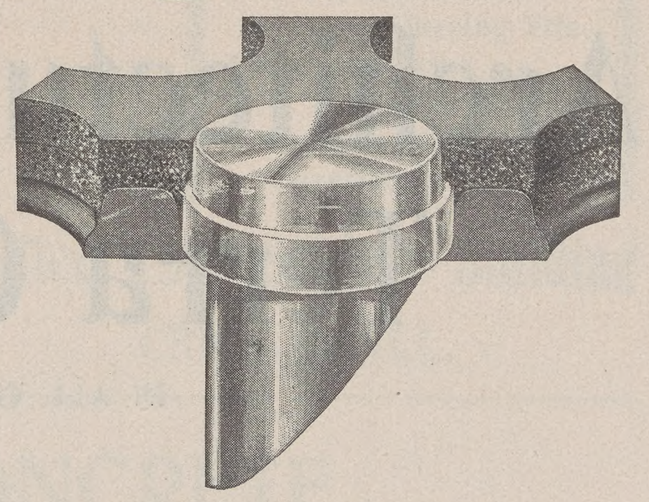

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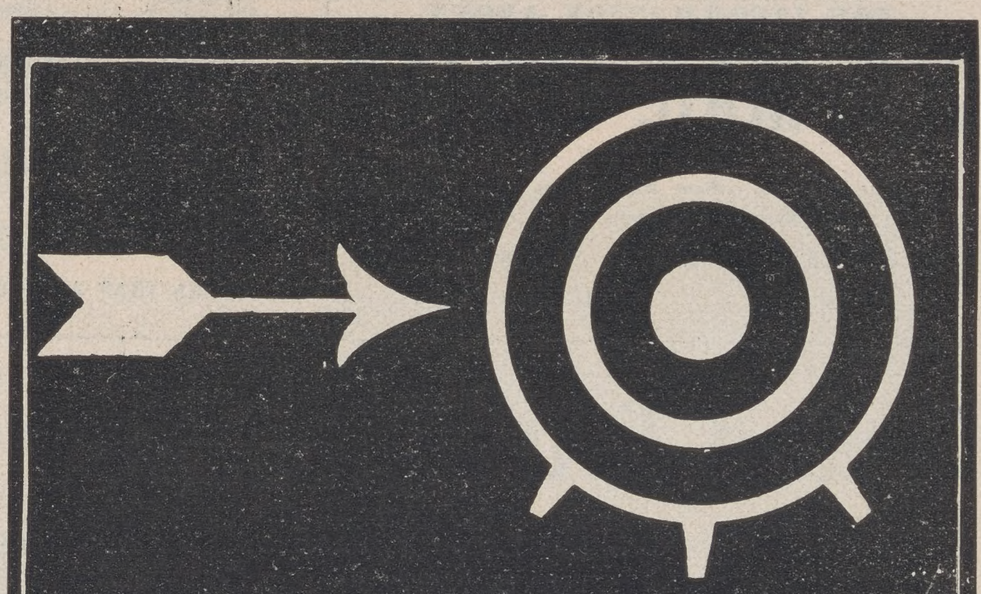

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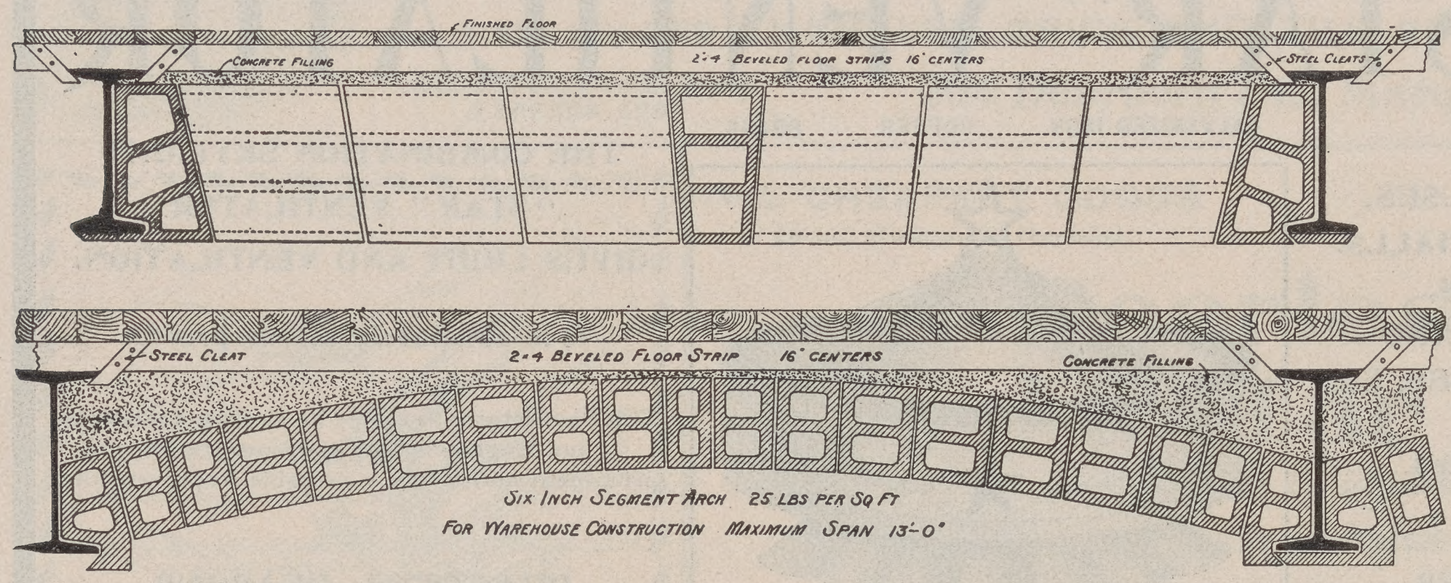

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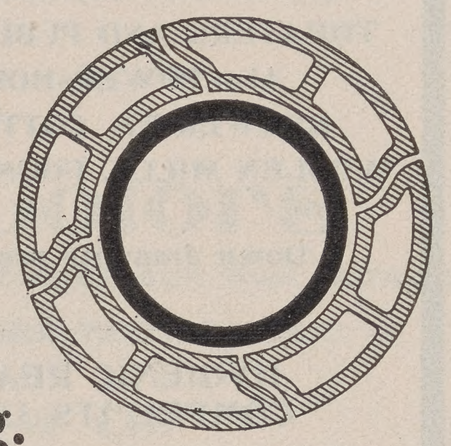

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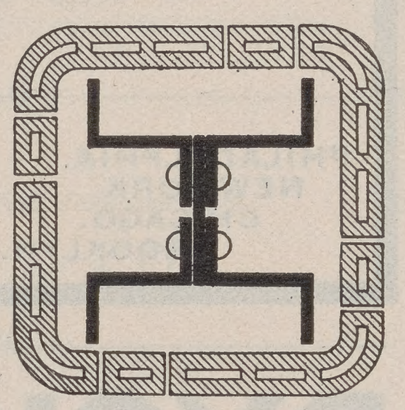

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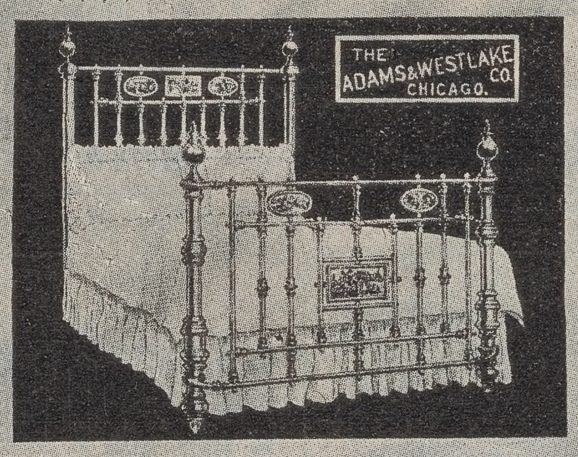

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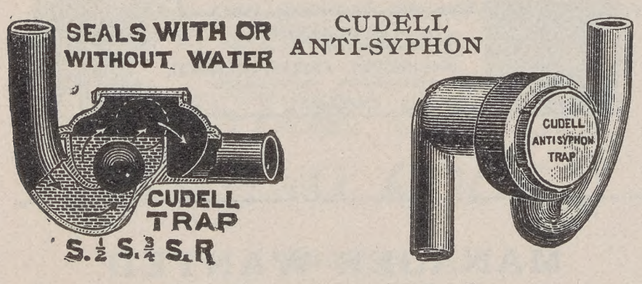

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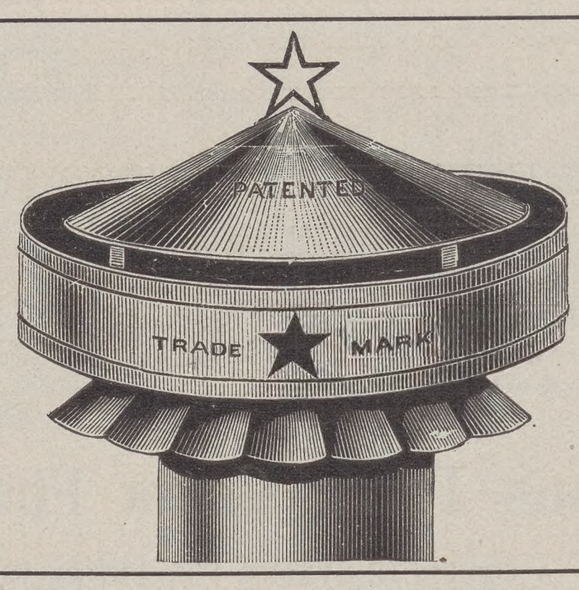

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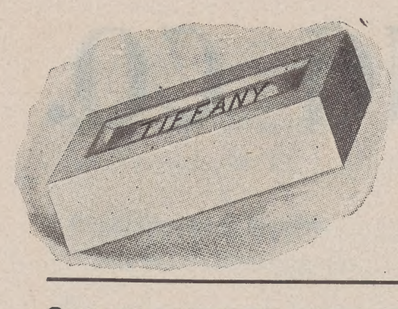

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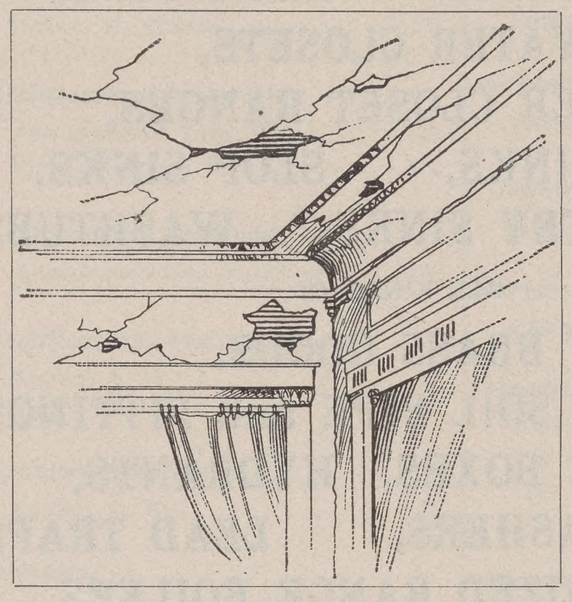

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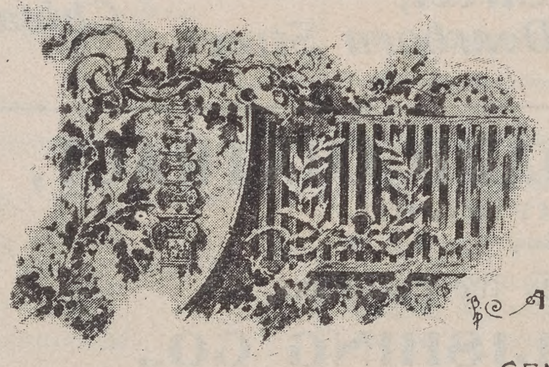

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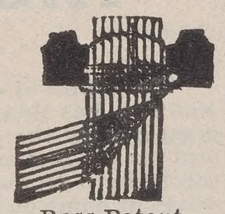

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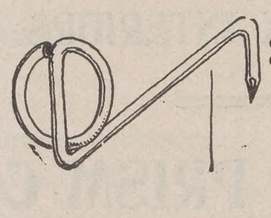

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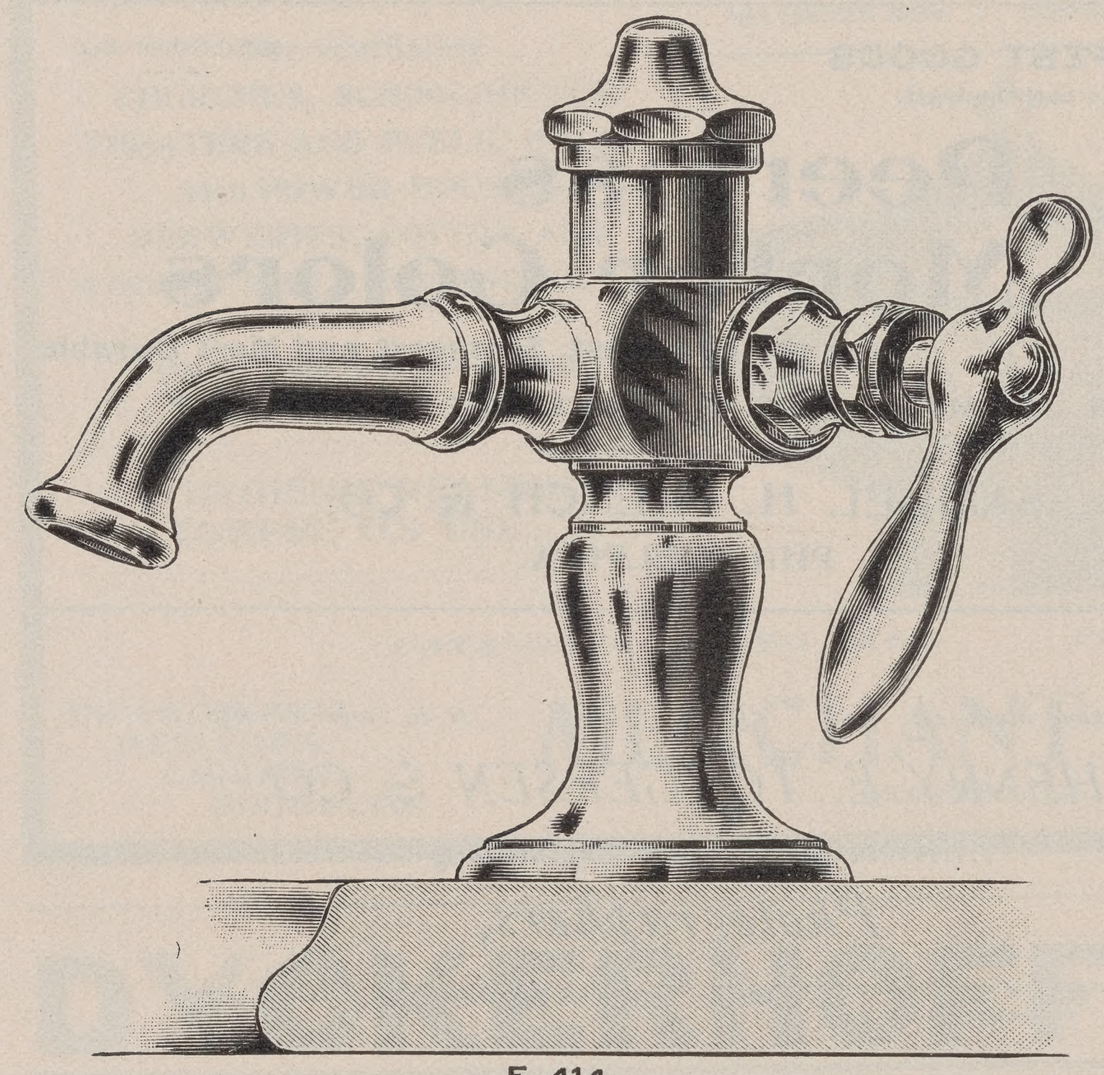

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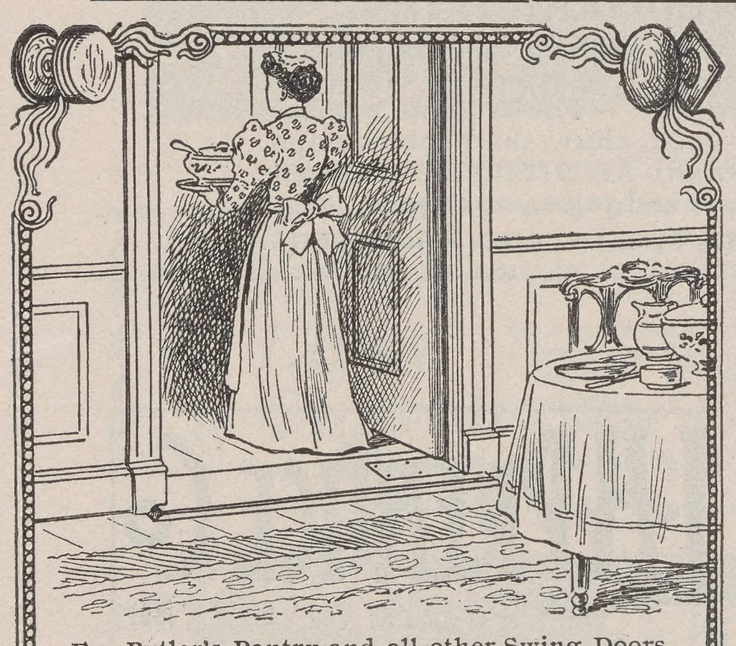

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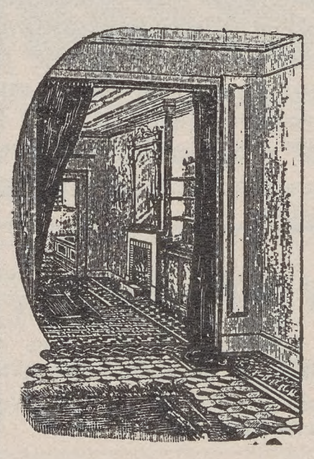

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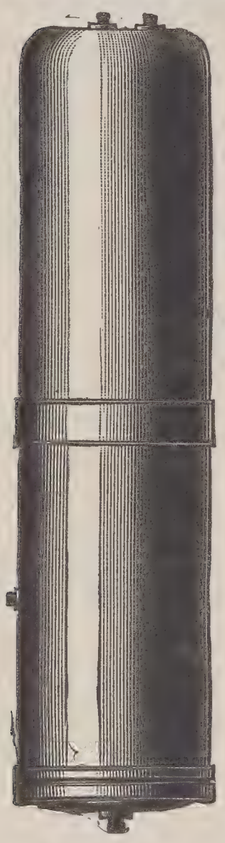

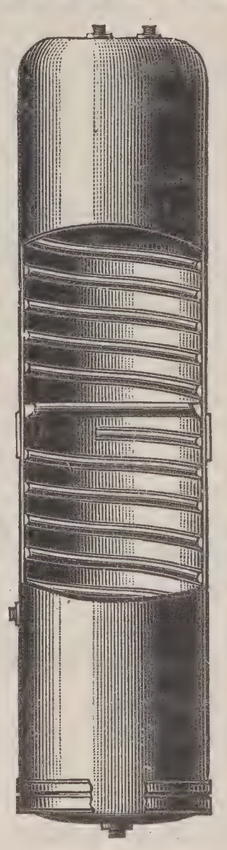

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THE INLAND ARCHITECT AND NEWS RECORD

Vol. XXXII. NOVEMBER, 1898. No. 4

THE INLAND ARCHITECT AND NEWS RECORD

A Monthly Journal Devoted to

ARCHITECTURE,

CONSTRUCTION, DECORATION AND FURNISHING

IN THE WEST.

PUBLISHED BY THE INLAND PUBLISHING CO.,

609-610 MANHATTAN BUILDING, CHICAGO, ILL.

L. MULLER, Jr., Manager. ROBERT CRAIK McLEAN, Editor.

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Thirty-second Annual Convention, A. I. A.

The thirty-second annual convention of the American Institute of Architects was notable mainly for its adoption of a new Constitution and By-Laws which inaugurate an entirely different form of procedure from that in vogue since its inauguration, and the three days of the convention were mainly devoted to discussion of the By-Laws. The more radical changes are in the representation by delegates at annual conventions and the form and scope of local organizations. While adopting the delegate system every effort was made to preserve the right of the individual member who might attend the conventions to take part in the proceedings, so that that which to many is the principal benefit to be derived from these gatherings, the personal contact and friendly intercourse between members, may be preserved. The entire plan, however, as it came from the committee, was studied and concrete, and we do not think it was in any large degree bettered by the changes made in the hasty discussion of a convention. A mistake was made in the selection of officers which will result in a partial or complete suspension of much of the Institute work for the year. From the vigorous and active board of officers of the several years past in which many government and other reforms were accomplished, men of equal standing but who have had little or no part in this work were substituted. This is particularly noticeable in the selection of the president and secretary. The former in professional standing is the peer of any of his predecessors, but has not appeared at a convention for several years, and has taken no part in the activity of the Institute. The latter is thoroughly competent, but the former secretary has been so capable and valuable that his judgment and untiring energy will be greatly missed. This mistake was due to the inclination to vote for men of professional reputation without regard for their administrative ability. It is especially unfortunate at this time when a new régime has been introduced and great knowledge of Institute affairs as well as administrative ability is demanded. The establishment of a headquarters at the capital of the nation and the new form of organization will be of lasting benefit and has advanced the standing of the profession as well as placed it upon a more permanent basis both in regard to the architect and to his client.

Legal Recognition of the Profession in Canada.

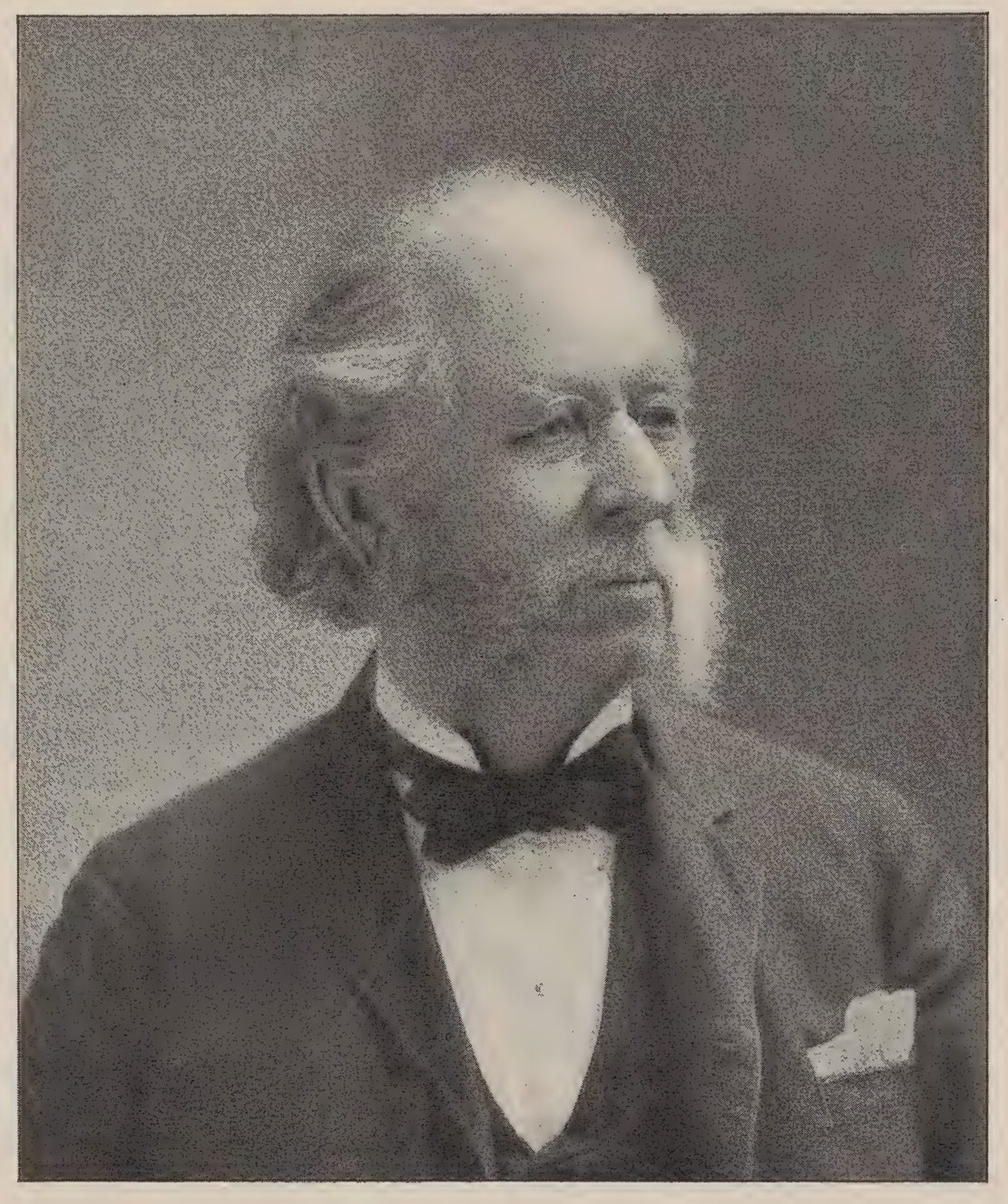
The eighth annual convention of the Province of Quebec Association of Architects, which was held at Montreal November 3 and 4, calls attention to the progress made by the profession in Canada during the past eight years. About that time, provincial associations were organized in Ontario and Quebec, and each in turn have secured the passage of an act compelling all practicing architects to be members of the provincial association, giving its members a status similar to that enjoyed by the legal and medical professions. Conditions are certainly as propitious in the United States; and now with a more concrete scheme of local and State Chapters, and the precedent established by the law passed in Illinois, it should not be many years before the architects in every other State will practice under a similar law.

MEMORIAL TO THE LATE W. W. BOYINGTON.*

BY PETER B. WIGHT.

WILLIAM W. BOYINGTON, an Honorary Member of the Illinois Chapter, American Institute of Architects, died at his residence in Highland Park, on October 16, in his eightieth year.

He was born at Southwick, Massachusetts, July 22, 1818, of Revolutionary and Colonial stock. He was by education a mechanic. In 1832 he was married to Eunice Miller, who survives him. They celebrated their golden wedding a few years ago. He leaves many descendants. Like many others among the older architects who have passed away, he was self-taught, and from carrying on the builders' trade, during which he availed himself of such meager facilities as were then afforded for study, he acquired sufficient knowledge to assume the profession of an architect. In 1853 he came to Chicago for the purpose of practicing his profession, and from that time to the present his life has been part of the architectural history of Chicago, while his practice has extended beyond its confines in many directions. No movement has ever been taken in its development in which he has not taken a prominent part. To give a list of his works would be under the present conditions impossible, for the record of all of them preceding 1871 has been lost, and no one living can compile them. The statement he is said to have once made, that if all the buildings he had planned were placed in a row, they would reach from Chicago to Highland Park, a distance of about twenty-five miles, was probably no exaggeration. And if it were possible to catalogue them, the list would fill a considerable pamphlet. It is said that his first work was a hotel, somewhere on Randolph street near the lake, for Charles Walker. A few of the most prominent structures erected before the great fire are remembered, only three of which, the North Side waterworks and standpipe, and the Wabash Avenue and Centenary Methodist churches, are now standing, though there may still remain some dwellings in the parts of the city spared by the great fire. Of those which were destroyed may be mentioned the Terrace Row of dwellings on Michigan avenue, where the Studebaker Fine Arts building and part of the Auditorium Hotel now stand; the Crosby Opera House, the Lake Shore & Michigan Southern Railway station, and the second Sherman House. Outside of Chicago he, in collaboration with the late O. L. Wheelock, his partner before 1859, designed the Joliet penitentiary. Of Chicago churches of ante-fire times, may be mentioned St. Paul's Universalist, the First Presbyterian, the First Baptist and the North Presbyterian. He also designed churches in Philadelphia, Indianapolis, Dayton, Grand Rapids and DesMoines. Since the great fire his most notable structures, besides many blocks of wholesale and retail stores, warehouses and factories, have been the third Sherman House, the second Lake Shore & Michigan Southern station, the Grand Pacific Hotel rebuilt, the Interstate Exposition building and the Board of Trade, during the first period of rebuilding; and the enlargement of the above-mentioned railroad station, the Chicago & North-Western Railway station, the completion of the State Capitol building at Springfield, following mainly the designs of Picquenard, the Columbus Memorial building at State and Washington streets, and the Illinois State building at the World's Fair, during the latest period.



WILLIAM W. BOYINGTON.

His reputation for successful hotel buildings twenty years ago was national, and he not only designed the best hotels of that time at Chicago, but was called to go to Montreal to design the Windsor Hotel and to Denver for another of the same name. During his early career at various times he was ably assisted by John W. Roberts, who has resided at Denver ever since the Windsor Hotel was built in that city. In his later career he has been assisted by his son-in-law and successor William George Williamson. The last work undertaken by Mr. Boyington was the extensive remodeling and improvement of the Sherman House, which was completed last spring, since which time he has practically retired from labor, but only on account of the infirmities which have ended with his death. So it may be said of him as of many others that he literally "died in the harness."

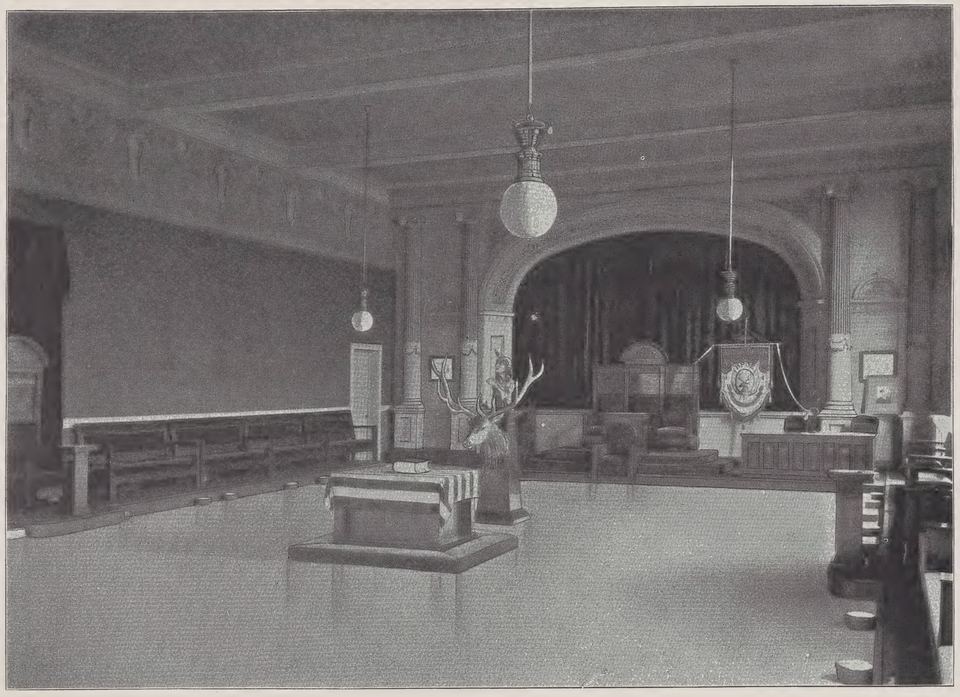
The above is but a mere sketch of a busy career extending over nearly half a century. To one who has held his position in the world so long with honor, and the confidence of his fellow-men, it seems to be an act of supererogation to offer any eulogium. Works and deeds, though silent, are often more eloquent than words. It was notable that all through life he kept abreast with the advancing science of building, and never insisted upon old methods as if they were good enough. While always modest in his personal bearing he made no pretensions to being a great designer. In the latter field he was always desirous to give full credit to his partners. His continued success up to within a few years past was due to the fact that his buildings were always good investments. In this fidelity to his clients' interests and his ability to give them complete satisfaction without allowing their buildings to be spoiled by their own foibles, he has set an admirable example to all young architects.

The fact should not be omitted that Mr. Boyington was among the first in this city to take an interest in the association of architects for mutual improvement. He was the first president of the Chicago Chapter of the American Institute of Architects, which was organized in 1870, and a Fellow of the American Institute of Architects to the day of his death.

Since Mr. Boyington's death, many facts have been brought to light. Of these it should be recorded that he was the inventor of the locomotive cab, placed on an engine at Springfield, Massachusetts, and it will be interesting to Chicagoans to know that his first plans, those for the hotel of Charles Walker, were drawn in the office of the commandant of Old Fort Dearborn. The first because he sympathized with the unsheltered locomotive driver, and the latter through the friendship of a government officer.

*This memorial was presented to the Illinois Chapter of the A. I. A. at its October meeting and the following resolution was offered by Mr. Van Osdel, and seconded by Mr. Adler:

Resolved, That the above memorial be spread on the records of the Chapter, that one copy be sent to Mrs. Boyington and one to the secretary of the American Institute of Architects, before the convention meets at Washington on November 1.

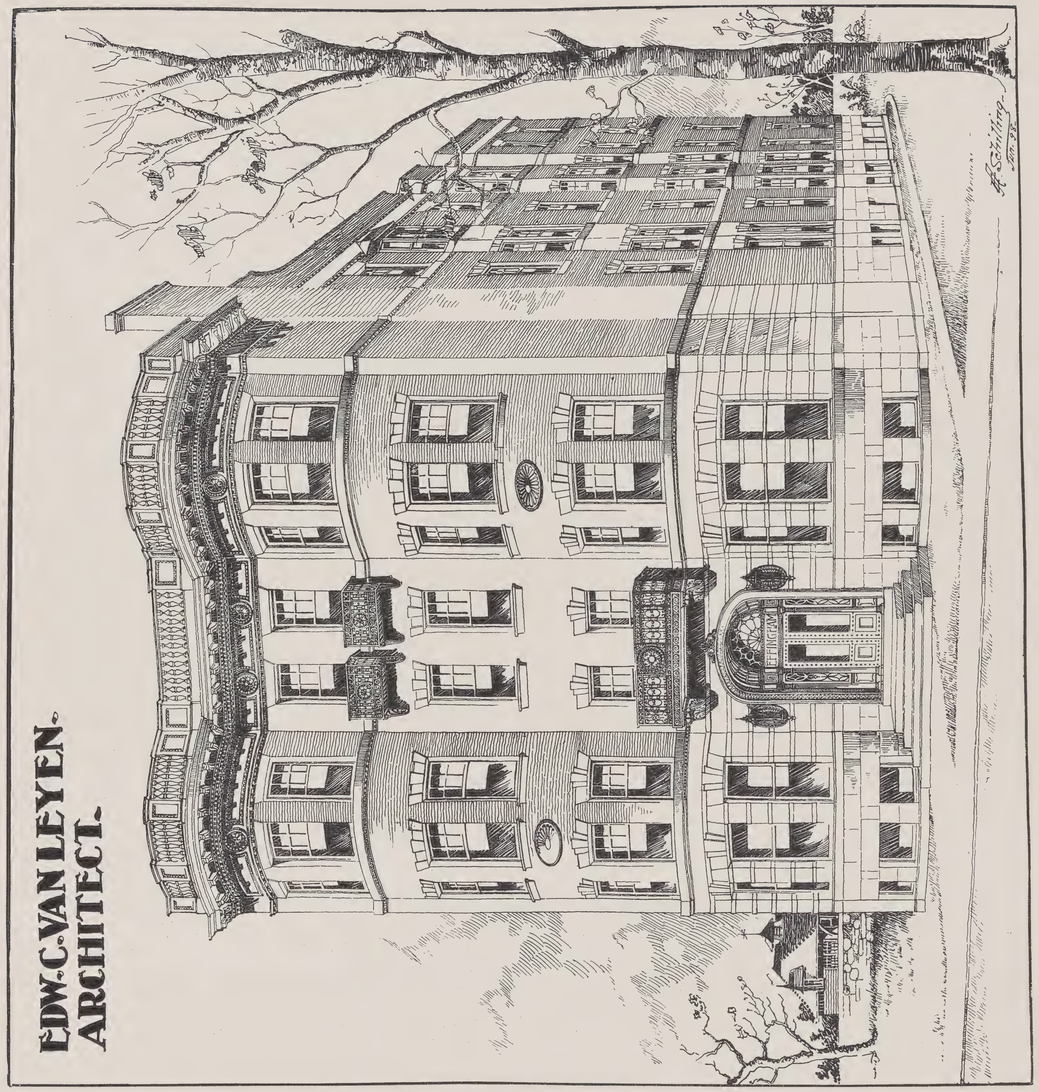


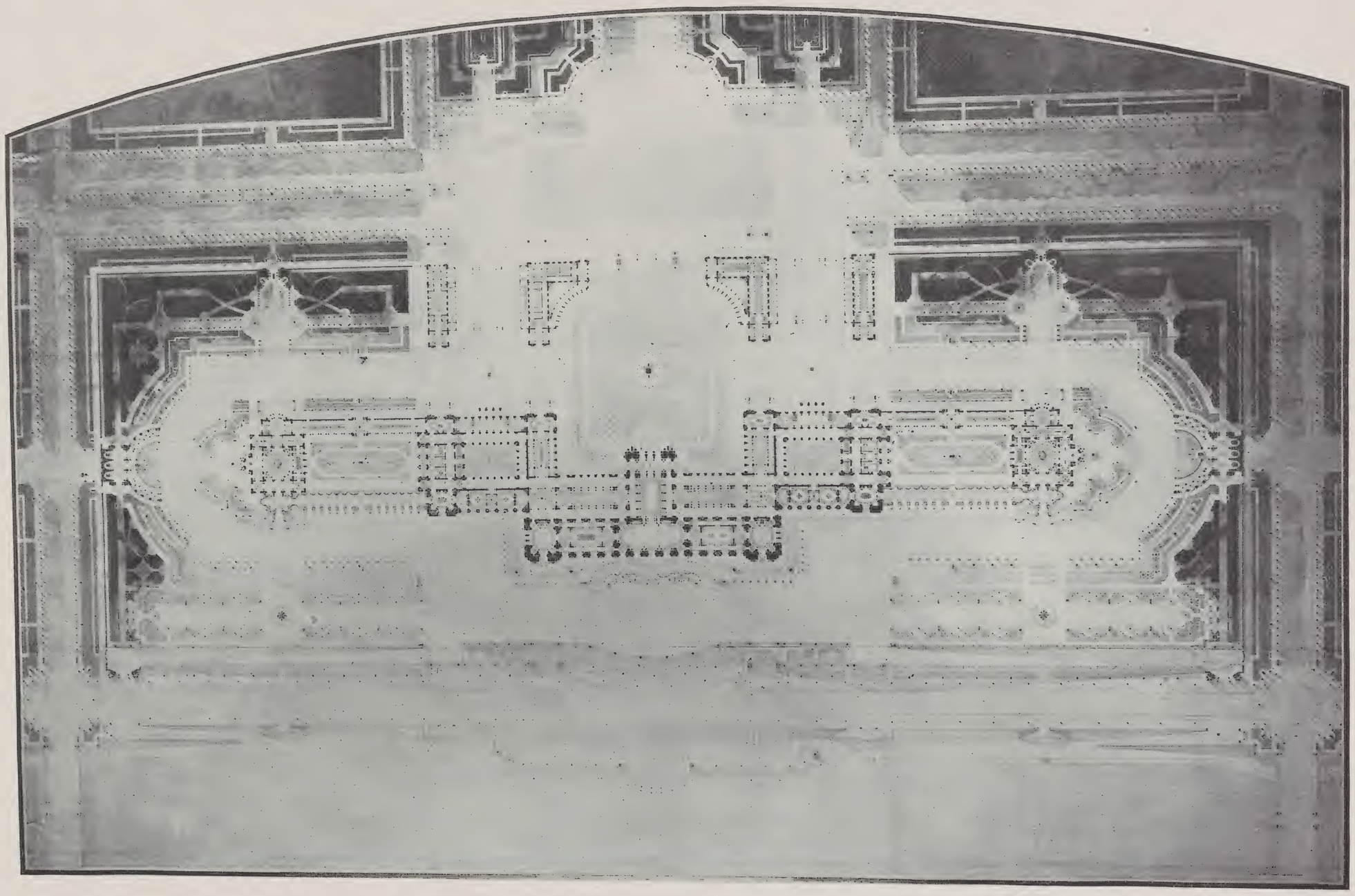
LODGE ROOM.

RECEPTION HALL.

B. P. O. ELKS CLUB, AKRON, OHIO.

F. O. WEARY, ARCHITECT.





GRAND PRIZE DESIGN. M. CHIFFLOT.

COMPETITION FOR GRAND PRIZE OF ROME.

A PALACE FOR RECEPTION OF SOVEREIGN GUESTS, EXPOSITION OF 1900.

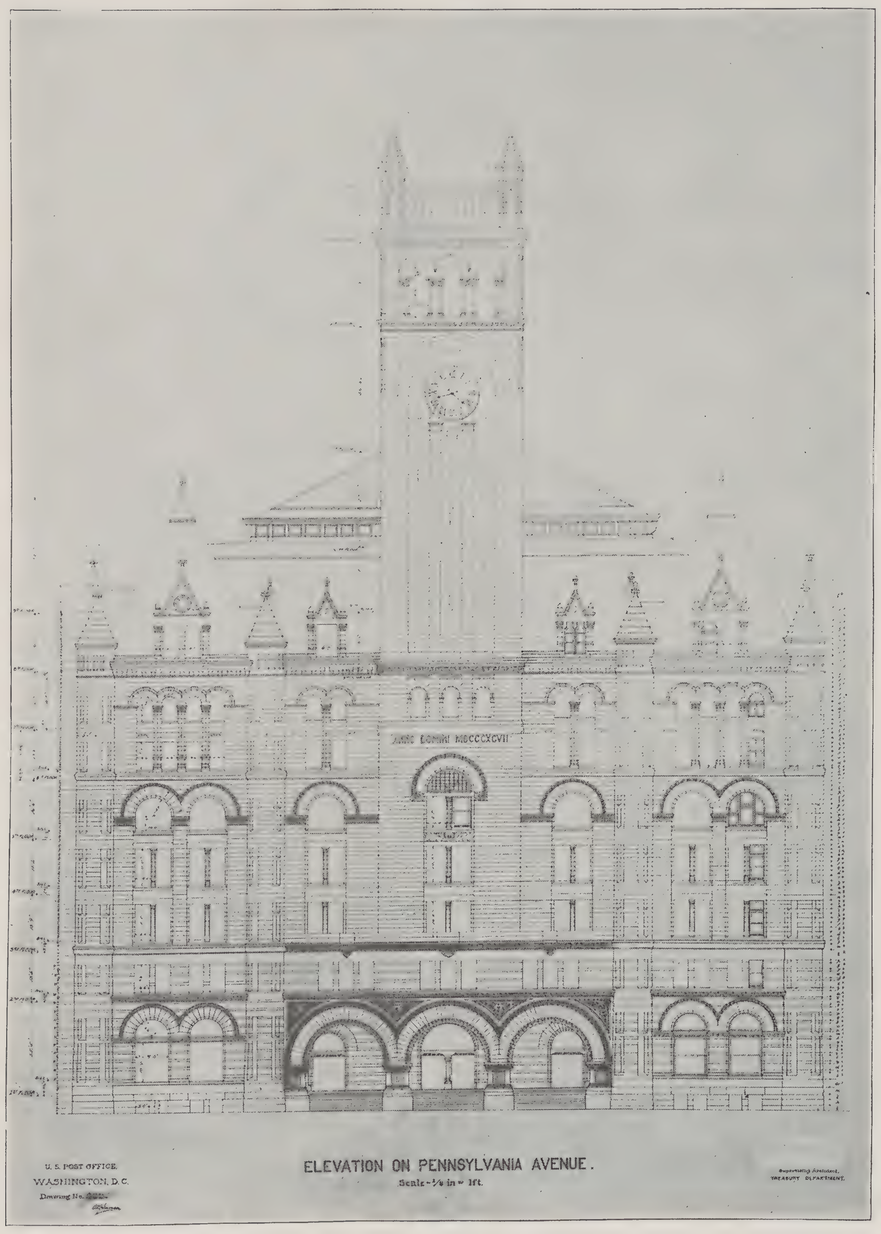
ONONDAGA COUNTY SAVINGS BANK, SYRACUSE, N. Y.

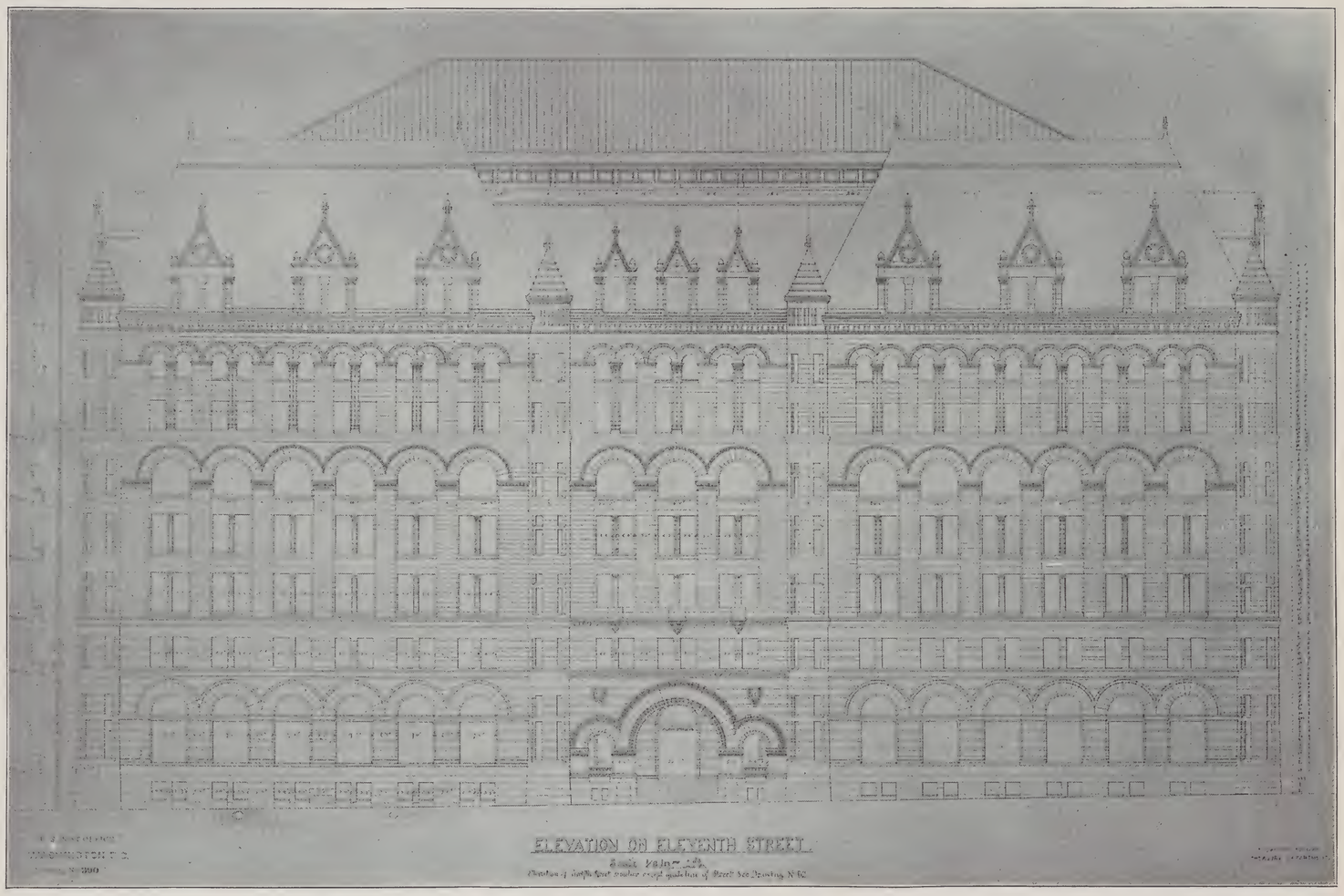
R. W. GIBSON, ARCHITECT, NEW YORK CITY.

From the Lake.

From the Drive.

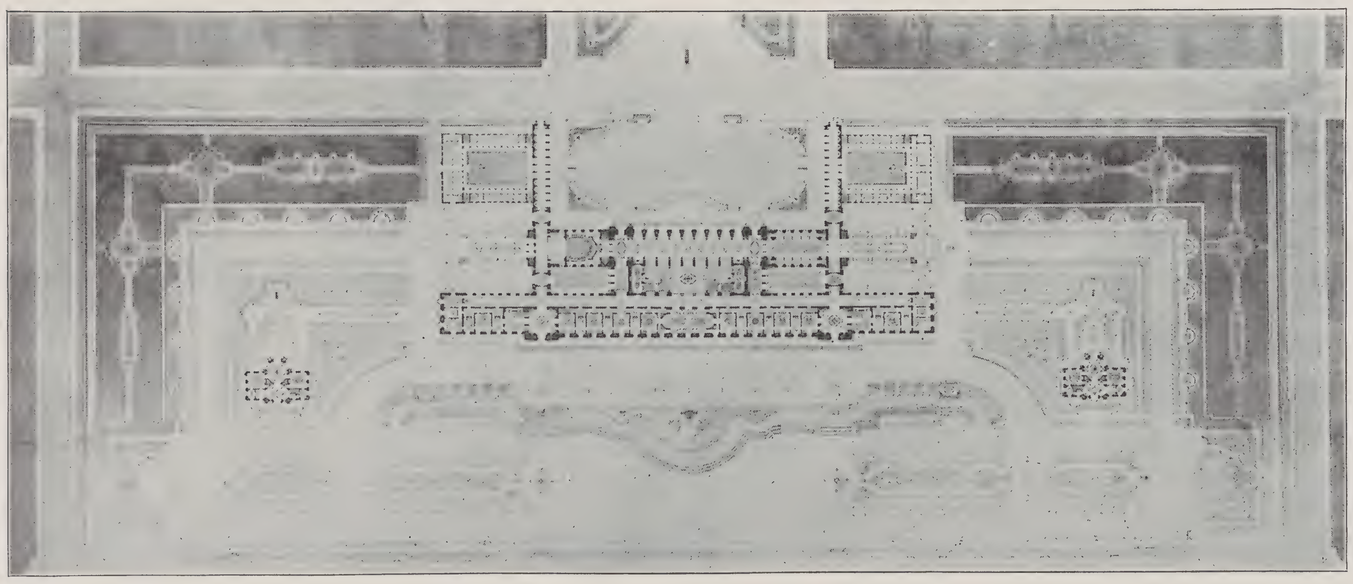
Summer Residence for Mr. Elmer Grey, Architect,
Fox Point, Wis

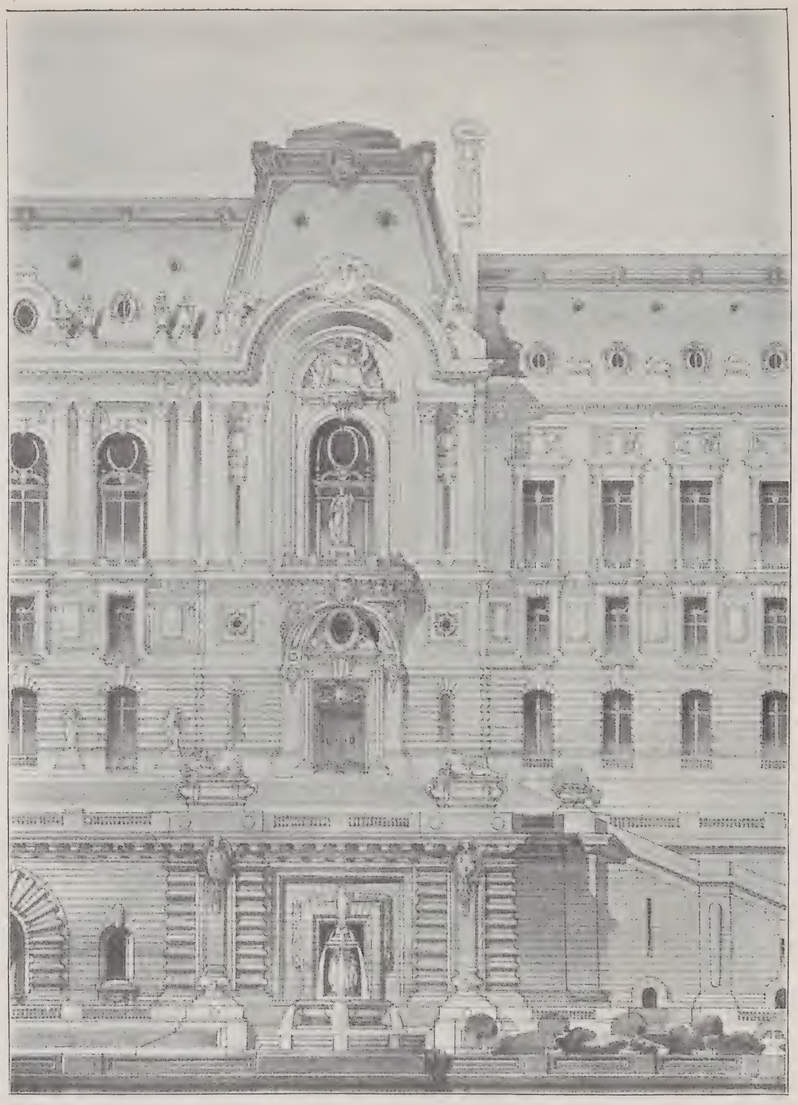


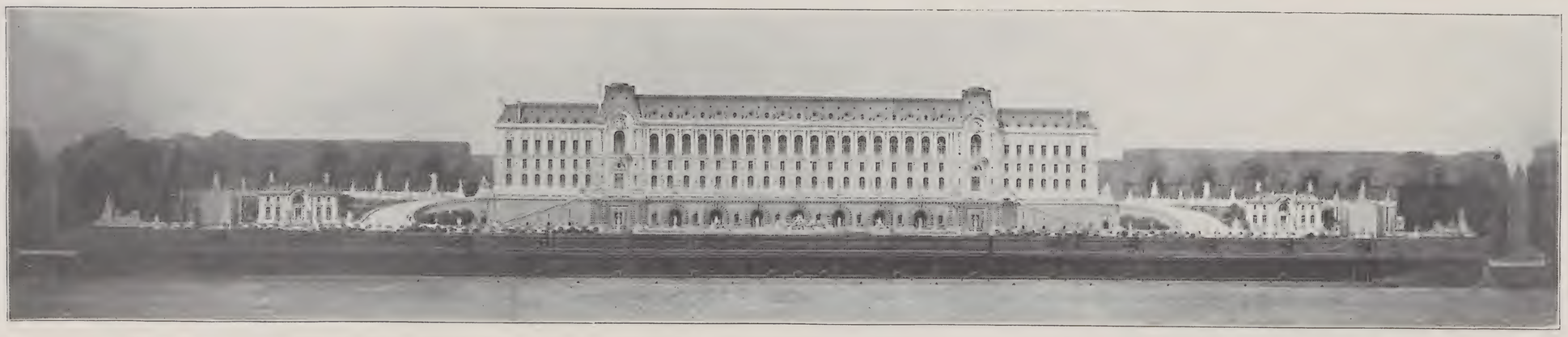


UNITED STATES POST OFFICE, WASHINGTON, D. C.

UNITED STATES SUPERVISING ARCHITECT.



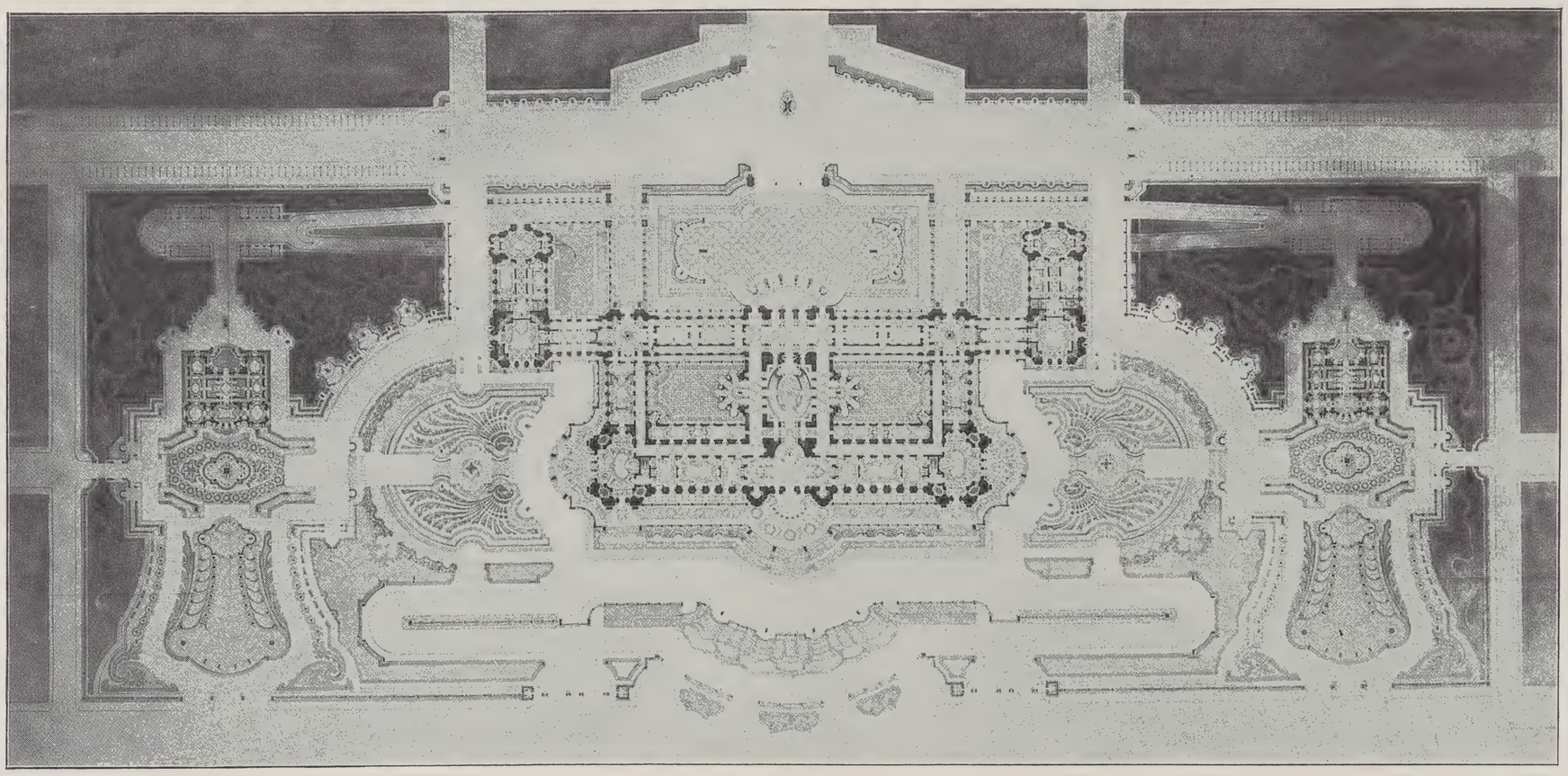


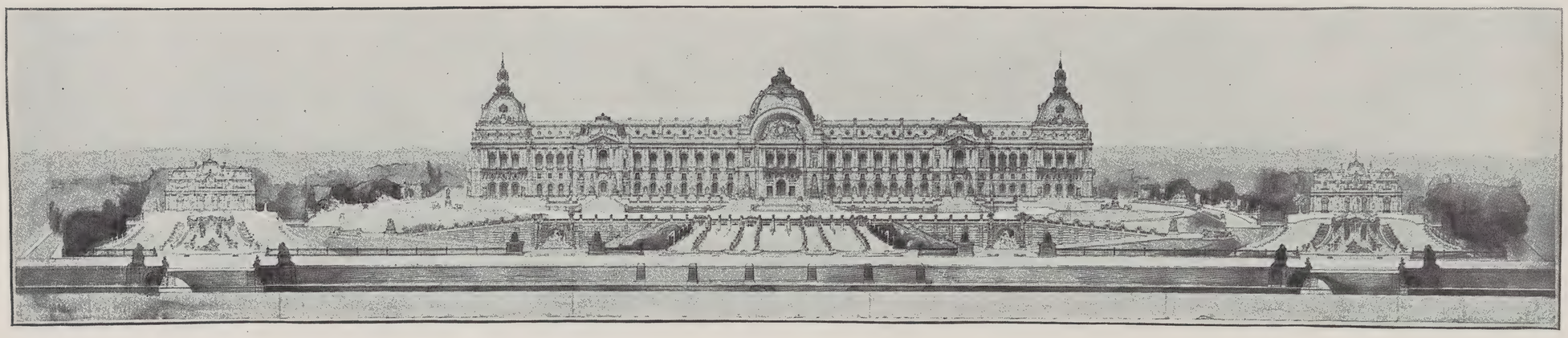


MENTIONED DESIGN. M. HULOT.

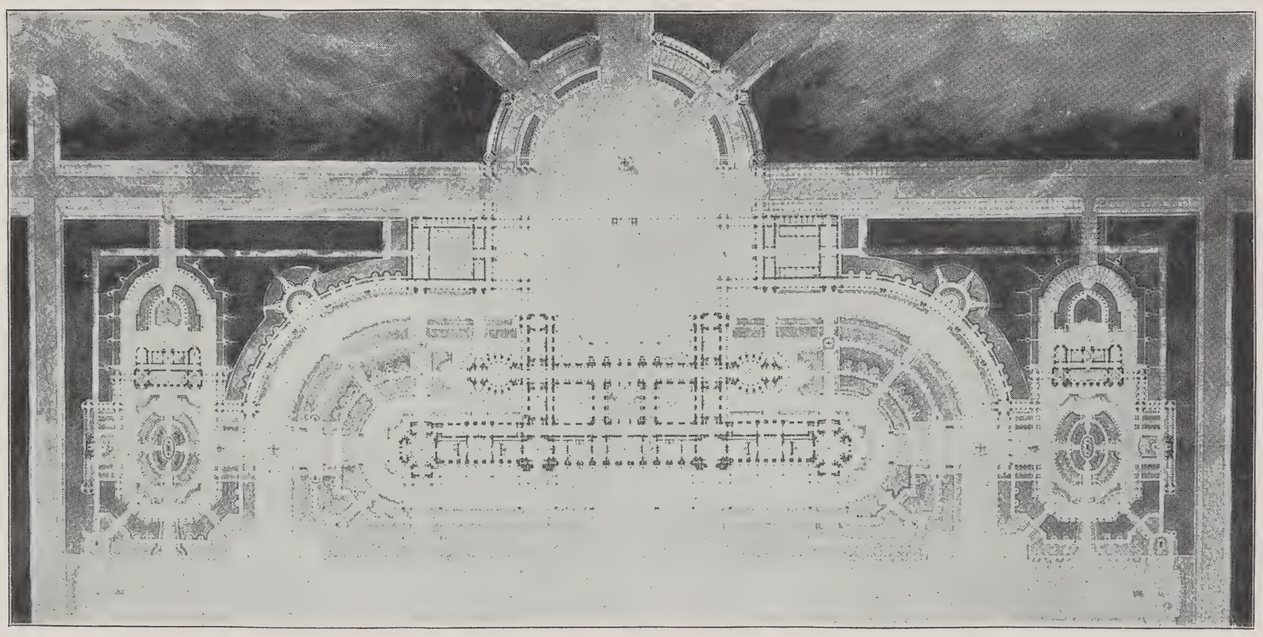
COMPETITION FOR GRAND PRIZE OF ROME.

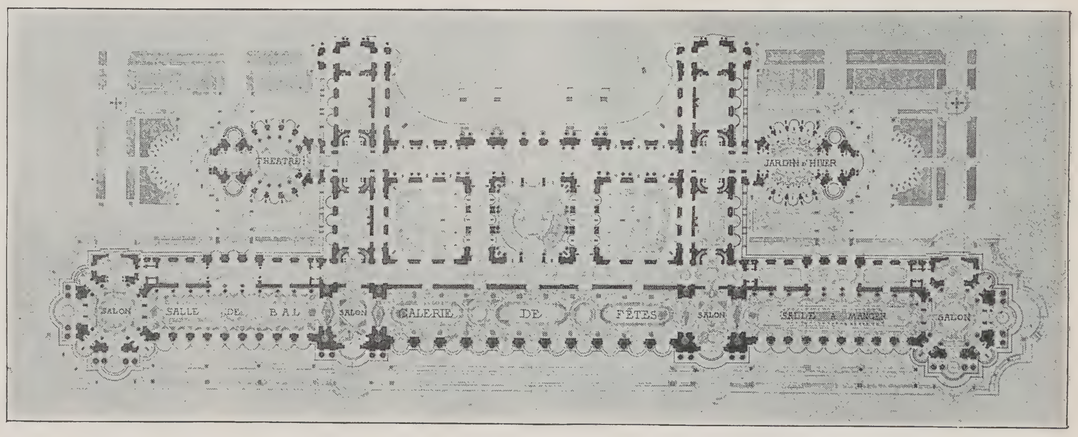
A PALACE FOR RECEPTION OF SOVEREIGN GUESTS, EXPOSITION OF 1900.

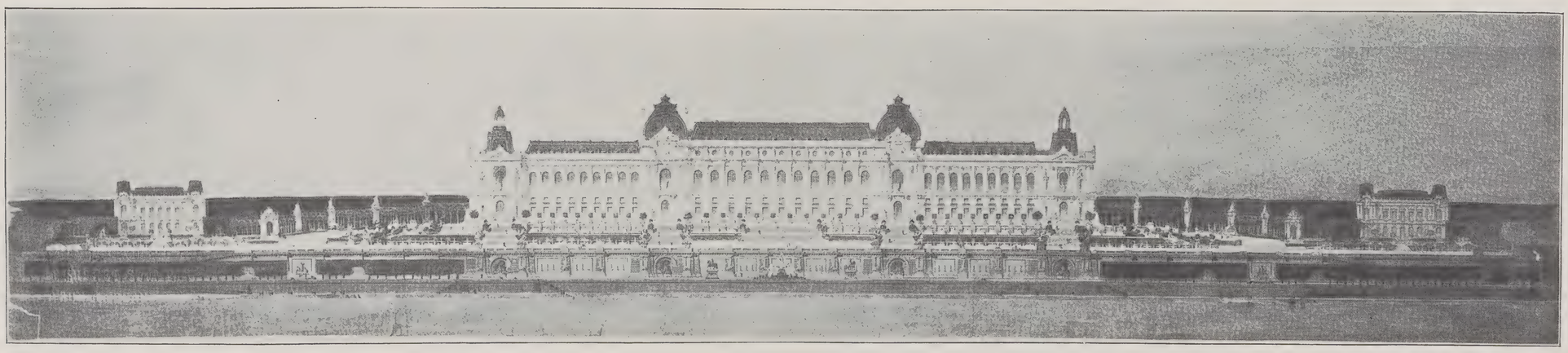




THIRD PRIZE DESIGN. M. AUBURTIN.







SECOND PRIZE DESIGN. M. ARFVIDSON.

COMPETITION FOR GRAND PRIZE OF ROME.

A PALACE FOR RECEPTION OF SOVEREIGN GUESTS, EXPOSITION OF 1900.

VIEW OF STAIRWAY, RESIDENCE OF G. E. HAMILTON.

RESIDENCE OF G. E. HAMILTON, WASHINGTON, D. C.

L. E. DESSEZ, ARCHITECT.

INLAND ARCHITECT PRESS.

VIEW IN DINING ROOM, RESIDENCE OF GEORGE HEADLEY, DETROIT, MICHIGAN.

NETTLETON & KAHN, ARCHITECTS.

Inland Architect Press.

VIEW IN HALL, RESIDENCE OF GEORGE HEADLEY, DETROIT, MICHIGAN.

Nettleton & Kahn, Architects.

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VIEW IN LIBRARY, RESIDENCE OF GEORGE HEADLEY, DETROIT, MICHIGAN.

Nettleton & Kahn, Architects.

INLAND ARCHITECT PRESS.

THE SHERRY BUILDING, NEW YORK.

McKIM, MEAD & WHITE, ARCHITECTS.

INLAND ARCHITECT PRESS.

DETAIL OF ENTRANCE, THE SHERRY BUILDING, NEW YORK.

McKIM, MEAD & WHITE, ARCHITECTS.

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ARCHITECTURAL ACOUSTICS.*

BY PROF. W. C. SABINE, OF HARVARD UNIVERSITY.

THE acoustical problem by which the architect of an auditorium is confronted is threefold — that of securing the greatest loudness throughout the hall of a sound produced at some chosen place, proportional loudness of all component notes, and the greatest distinctness of successive enunciations. These three are the necessary, as they are the entirely sufficient, conditions for good hearing. Each, however, can be secured only at the partial expense of the others. The solution of the problem is, therefore, essentially a compromise. Moreover, it is a compromise that must be met differently, according as the hall is to be used for speaking or for music, and if for music differently for different kinds. It is in the solution of this problem that I hope to be of service.

The simplest auditorium is, of course, the open air. In this case, however, the sound diminishes rapidly in intensity as it spreads uninterruptedly to a greater and greater distance. A wall immediately behind the speaker would reflect to the audience the portion of sound otherwise lost in that direction. A ceiling overhead, side walls, and a wall behind the audience, would save even more. Should these surfaces be perfect reflectors, no matter how they might be placed, all the sound reflected from wall to wall would ultimately reach the audience. In fact, however, walls though good are not perfect reflectors, and there is more or less loss. Moreover, the sound that has suffered many reflections and has traveled far, will arrive too long after the sound coming directly to be of service in reinforcing it. It is desirable, therefore, to so shape the room, so turn the walls, and so incline the ceiling as to reflect the sound directly on the audience. Surfaces not so available should be deadened into being poor reflectors. These considerations lead immediately to the following recommendations, which, however, are not always practically available. A wall immediately behind the speaker, angle walls cutting off the corners of the room at each side of the speaker, and a sloping ceiling, not high, immediately above him, are advantages. A curved ceiling over the audience, or one with sloping sides, is favorable. On the other hand, there is no especial advantage in giving to the room an ellipsoidal shape, as is often stated. An accurately ellipsoidal shape, with the speaker at one focus — an often recommended arrangement — would profit but one particular point in the room, the other focus, and would make of the whole a whispering gallery. Again, a room shaped like a paraboloid, and this also has been proposed, would be positively bad, unless the axis of the paraboloid were very much inclined to the horizontal — never part of the plan. Indeed, the conic surfaces have been merely words to conjure by. There is no simple, geometrical surface ideal for this purpose ; for the variables—reflection, diffraction and absorption — make the problem very complex. Each case must be worked out on its merits. To return, a curved ceiling over the audience, reaching low behind the speaker and at the rear and sides of the hall, is good ; but a curved ceiling having the speaker at the center of curvature is the very worst possible. The rear wall and the more distant side walls are, on account of distance, likely to be valueless, or worse than valueless, except to the audience near them. They may, therefore, to advantage be low, or occupied by galleries, which when furnished with cushions or filled with people, are poor reflectors.

In considering any special case, it is to be borne in mind that the sound coming directly from the speaker is diminished in intensity not merely on account of the distance, but also from absorption by the garments of the audience over which it passes. Therefore, if the ceiling be very low, hearing, while good in front, will be bad in the rear of the hall. This is especially true beneath a low gallery. Here there is a double disadvantage; the sound enters the opening in front diminished in intensity by traveling over the audience; and, screened by the gallery, this part of the house gets no benefit from the reflection by the ceiling. The expression of persons occupying such positions is that the sound seems smothered. On the other hand, the sound that enters the gallery, having traveled farther above the audience, has lost less by absorption, and is more reinforced by reflection from the ceiling. The hearing in the front rows of the gallery is therefore excellent, and the gallery may well have a greater depth than the balcony below it. In both, the seats should rise more rapidly than on the floor in front, not merely for seeing but for hearing purposes, and also to avoid leaving bare walls to reflect prejudicial sound to other parts of the hall. In even the gallery the depth cannot much exceed the clear height above it without giving cause for complaint.

Throughout all speculation in regard to reflecting surfaces there is one point that must not be lost sight of. Reflection from any extended surface is regular only when the minor inequalities, as ceiling decorations, paneling, ornamental niches, recesses of doors and windows are small in comparison with the wave length of the sound ; otherwise the reflection is diffused.

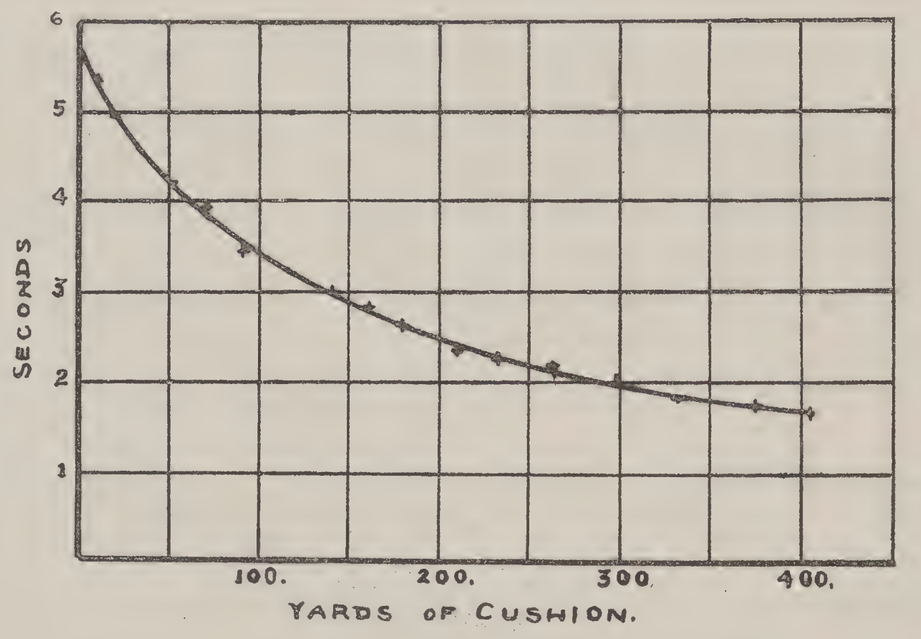
The next phase of the architect's problem is much more intricate, and only an outline may be here attempted ; in scientific acoustics it is called "Interference." Up to this point the direct and the reflected sound have been spoken of as if always reinforcing each other when they come together. A moment's consideration of the nature of sound will show that as a matter of fact it is entirely possible for them to oppose each other. Thus, the sounding body in its forward motion sends off a wave of condensation, which is immediately followed through the air by a wave of rarefaction produced by the vibrating body as it moves back. These two waves of opposite character taken together constitute a single sound wave. The source continuing to vibrate, these sound waves follow each other in a train. Bearing in mind this alternating nature of sound, it is evident that should the sound, traveling by different paths — by reflection from different walls — come together again, the paths being equal in length, condensation will arrive at the same time as condensation and will reinforce it, and rarefaction will, similarly, reinforce rarefaction. But should the one path be a little shorter than the other, rarefaction by one and condensation by the other may arrive at the same time, and at this point there will be comparative silence. The whole room may be mapped out into regions in which the sound is loud and regions in which it is feeble. When there are many reflecting surfaces the interference is much more complex. When the sound changes in pitch, the interference system is entirely altered in character. These are not merely theoretical considerations. A room in the Harvard Physical Laboratory has been partly mapped. This room, known as the Constant Temperature Room, is of the simplest possible character. The four walls, the ceiling and the floor are plain — there being no windows, and the door being flush with the wall. This room has been of great service during the past three years as a place in which to try preliminary experiments on a small scale before passing to the more complicated conditions of a large hall. One occurrence in this room will illustrate the point under consideration. The source of sound was a middle C organ pipe blown by a steady wind pressure. The observer, on changing the position of his head by ten or twelve inches, could hear the note change in the most positive manner from middle C to the C an octave above. The explanation is simply this. The organ pipe did not give a single pure note, but gave a fundamental middle C accompanied by several overtones, of which, in this case, the strongest was the octave C. Each of these notes has its own interference system, and near the observer the region of silence for one system happened to coincide with the region of reinforcement in the other, and vice versa. Thus the observer in one position heard the fundamental note, and in the other the overtone. The confusion that this phenomenon is capable of producing in the complex and rapidly changing sounds of the human voice is evident. Such is the pathology of "interference"; but I am unable to propose a cure for it that would be generally applicable, although in the case of one hall it was possible to relieve somewhat this particular difficulty. Until recently it seemed possible to formulate a general line of procedure, but this now seems doubtful.

The third phase of the problem, while in many ways not so intricate as the last, deserves careful consideration, because in it lie the most frequent and needless failures. Sound, being energy, once produced in a confined space, will continue until either transmitted by the bounding walls or transformed into some kind of energy, generally heat. This process of decay is called absorption. Thus in the lecture room of Harvard University, in behalf of which this investigation was undertaken, the absorption was so slight, and the residual sound was audible so long after the source of sound had ceased, that it was quite impossible, by speaking loudly or gently, to make oneself understood at the other side of the room. Even a very deliberate speaker would utter twelve

* Paper read before the thirty-second annual convention of the American Institute of Architects, at Washington, D. C., November 2, 1898. Revised by the author for publication in THE INLAND ARCHITECT.

or fifteen syllables during the audibility of one. With a large audience present it was not so bad, but was still intolerable. Such a misfortune as this may arise from two causes. If it occurs in a room when the audience is small, the prominence of the defect may be due to the absence of sufficient absorbing power in the material and the furnishing of the room; if the defect continues when a large audience is present, it arises also from a failure to have so shaped the room as to adequately employ the great absorbing power of an assemblage of people. In this particular case, the appearance of the room being very attractive and the lighting excellent, alteration of shape was out of the question, and it was desirable that any permanent device should be inconspicuous. It was requested that some accurate numerical measure of the acoustical quality of the room should be secured, and that the investigation should be conducted in as quantitative a manner as possible. The resulting experiments have extended, more or less interruptedly, through the past three years. The first method for determining the rate of decay of the sound, and therefore the amount of absorption, was by means of a sensitive, manometric gas flame measured by a micrometer telescope. Later, photographing the flame was tried; but both methods were abandoned, for they both showed, what the unaided ear could perceive, that the sound as observed at any point in the room died away in a fluctuating manner, passing through maxima and minima. Moreover, they showed what the unaided ear had not, but immediately afterward did recognize, that the sound was often more intense immediately after the source ceased than before. All this was interesting, but it rendered impossible any accurate interpretation of the results obtained by these or similar methods. It was then found that the ear itself, aided by a suitable electrical chronograph for recording the duration of audibility of the residual sound, gave a surprisingly sensitive and accurate method of measurement. For example, in the Constant Temperature Room of the Physical Laboratory it was impossible to detect by this method the alteration of the rate of absorption of sound produced by a piece of hair felting a foot square placed anywhere on the floor; it was easy to detect the difference between the effects produced by a man or a woman coming into the room; and to detect, though with considerable difficulty, even a slight difference made by a change in the clothes of the observer. Thus, failure to record the clothing worn in a certain series of experiments made it necessary to discard over 3,000 observations. In a large auditorium, of course, such small differences could not be noticed, but the method was one of remarkable delicacy. It was also very constant in its results, provided the experiments were undisturbed by outside noises. Proper conditions could be secured only at night between twelve and four o'clock, and all the experiments were performed at that time. Considerable additional accuracy is gained by taking the average of a large number of observations in each case instead of relying upon a single one. This method in the hands of different observers gives almost identical results, provided they practice sufficiently and are not of abnormal hearing. Three gentlemen have devoted the necessary time to test this point. Experiments have been carried on in the following rooms belonging to the University: The large lecture room above referred to, two rooms in the Physical Laboratory, of which one is the Constant Temperature Room, Saunders Theater, Appleton Chapel and four rooms in University Hall, including the Faculty Room; also Steinert Hall in Boston, devoted to chamber concerts; and the First Parish Church in Brighton.

The relative absorbing power of various substances was tested in the following manner: Having determined the duration of the residual sound in some room when entirely empty, a small amount of some standard substance was brought into the room and the duration of the residual sound was again determined. This was repeated as more and more of the substance was brought in. The results were then plotted on coördinate paper, giving what might, perhaps, be called a calibration curve of the room. For example, in the lecture room whose plan of elevation is shown in the first diagram, the duration of the sound was 5.62 seconds. Hair cushions of high grade were obtained from Saunders Theater. On introducing 27 running feet of these cushions the duration of the residual sound fell to 5.33 seconds; 56 feet brought it down to 4.94 seconds. This process was continued until 1,500 feet had been gradually introduced into the room, and the cushions covered all the chairs, the aisles, the platform, and, hanging from the ceiling, they covered the wall at the back of the room. The duration of the residual sound fell to 1.14 seconds. These results when plotted, gave the curve shown in the diagram. This experiment, requiring, of course, several nights' work, having been completed, all the cushions were removed, and the room was in readiness for the test of other absorbents. Curtains of chenille, 45 inches wide and 56 feet in total length, were draped in two of the spaces between the columns. This reduced the duration of the



sound to 4.51 seconds. Referring to the curve, it is obvious that this amount of chenille, when so draped, is equivalent to 100 feet of cushions. The curtains were then removed, draped in front of the rear wall, and again tested. They were then draped beside the platform. From these experiments in which the curtains occupied first one part and then another of the hall, the result was deduced that on an average 23 square yards of chenille draped as a curtain were equivalent to 15 square yards of cushion. Oriental rugs of the highest grade—thick, heavy Herez Demirjik and Hindostanee—were tested in a similar manner. Cretonne cloth, canvas and hair felting were tried with the comparative results indicated in the table.

RELATIVE ABSORBING POWER.

Hair cushions on seats	per square yard	2.03
Heavy oriental rugs on floor	" " "	.56
Chenille draped as a curtain	" " "	1.32
Cretone cloth hanging flat	" " "	.33
Canvas " " "	" " "	.71
Hair felting against the wall, ½ inch thick	" " "	1.0
" " " " 1 " "	" " "	1.8
" " " " 2 inches "	" " "	2.4
Audience per person		1.3
Individual man sitting clear		1.8
" woman " "		2.2

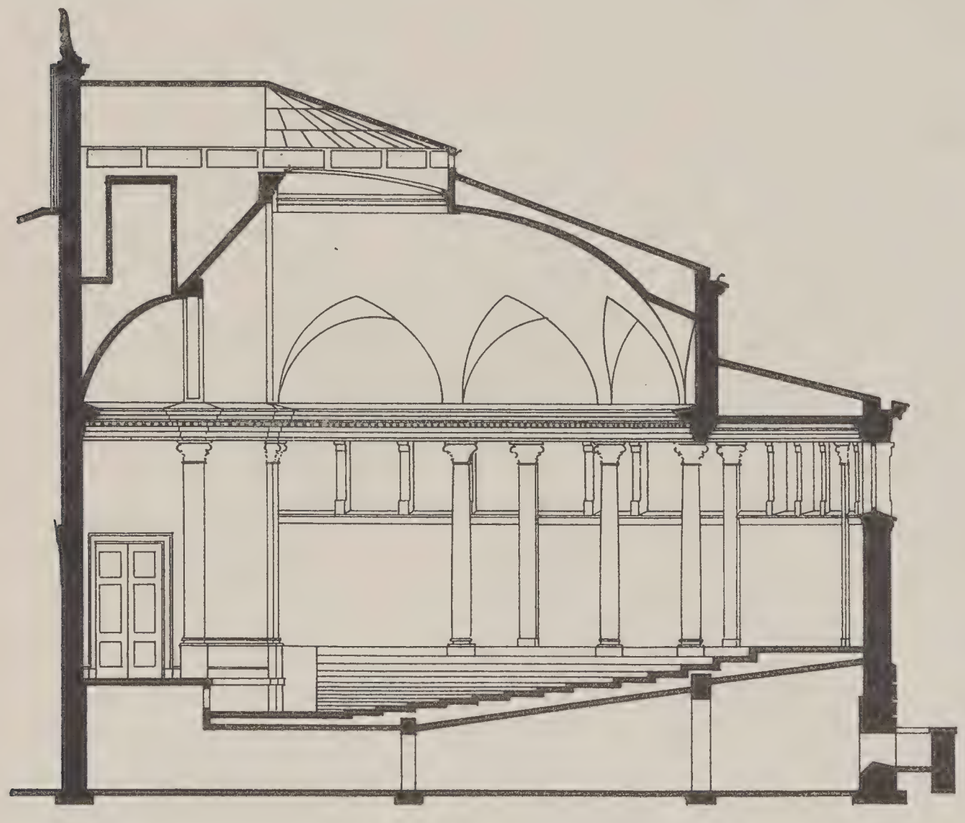
Some observations were also made on the effect of cushion coverings; experiments in the laboratory with rubber gossamer showed that the covering, no matter how inpervious to air, provided it be soft and flexible, had no effect on the absorbing power of the cushions. This result was confirmed in Appleton Chapel. After testing this room with the leather-covered cushions in their ordinary positions, they all were turned over, thus exposing a canvas-covered side. The difference in the duration of sound was scarcely perceptible. Perhaps the most interesting of these results is the one measuring the absorbing power of an audience. It was obtained through the kindness of one hundred and twenty-one persons, who in the summer of 1897 submitted to the experiment. Of this number sixty-six were women and fifty-five were men. The experiment was not performed so late at night as might be desirable, but this was partly compensated for by having two observers. Their results agreed almost exactly. The result given in the table is the average absorbing power per person without distinction between men and women. Other experiments on individuals were made in the laboratory, in the fall, when heavier clothing was worn, and gave, on the average, as the absorbing power, for man 1.8 and for women 2.2. Here, unlike the preceding case, the individuals were not screened by neighbors and near chairs. Another result is interesting as a partial answer to a question that is frequently asked in regard to the effect of beams and girders. An open-work scaffolding, consisting of about 400 feet of plank and 600 feet of scantling gave almost no appreciable absorbing effect. It may have had another effect, but that is a subject too intricate and tedious to be discussed here.

It must not be thought that an absorbent is always desirable, or if desirable, that it is so at any point.

This completes the independent discussion of the three factors

in the architect's problem — loudness, interference and distinctness — and brings us again to the initial proposition that the solution of this problem as a whole is necessarily more or less a compromise. Loudness — all the loudness, it is safe to say, that an architect can secure, provided it be as uniform as possible over the hall — is desirable. Interference, with its consequent distortion of chords and complex sounds, is, with equal positiveness, undesirable. Loudness can be obtained only by the superposition of direct and reflected sound, and superposition of sound cannot be had without the danger of interference. In this dilemma the architect would do well to devote himself to the consideration of loudness alone. Interference is, practically, a less noticeable evil than either deficient loudness or excessive residual sound. Residual sound, always an evil in a hall used for speaking, can be reduced to a minimum by so inclining surfaces as to bring all the sound by one reflection upon the audience — always the most active absorbent factor in a room. This will also make the loudness a maximum. In order that the hall may remain good when the audience only partly fills the hall, the chairs should be provided with cushions — the next most active absorbent material on our list. While the residual sound should be a minimum in a room devoted to speaking, to military music, perhaps also to orchestral music, it probably should not be a minimum in a room designed for chamber concerts, and especially if designed for piano music. In the latter case the effect of the residual sound is to increase the fullness of tone of the instrument and to diminish its staccato effect. A suggestive incident occurred in the recent investigation conducted by the Department of Music of the University to determine whether a certain room was suitable for a series of chamber concerts to be given in connection with one of its courses. The test by a very select audience of experts was made with piano music, and was conducted under such conditions—size of audience, and so forth — that the duration of the residual sound was 2.5 seconds. The room was pronounced satisfactory. On the whole, however, this use of the auditorium as a contributor to the æsthetical value of the musical production, rather than as a vehicle of exact transmission, is a too serious complication of the problem.

The preceding suggestions have been on the supposition that the architect could control his design by acoustical considerations alone. This is, of course, not the case. The artistic appearance of the hall, adherence to conventional forms—as a lofty ceiling in a church, adequate and pleasing lighting by day and by night, adequate and uniform ventilation — all make demands at times incompatible with acoustically ideal conditions. A hall having proved faulty under trial, it may become necessary to diagnosticate the case and prescribe the remedy. There is no simple treatment that can cure all cases. There may be inadequate absorption and prolonged residual sound; in this case absorbing material should be added in the proper places. On the other hand, there may be



excessive absorption by the nearer parts of the hall and by the near audience, and the sound may not penetrate to the greater distances. Obviously the treatment should not be the same. There is such a room belonging to the University known locally as Sever 35. It is low and long. Across its ceiling are now stretched hundreds of wires and many yards of cloth. The former has the merit of being harmless; the latter is like bleeding a patient suffering from a chill. In general, should the sound seem smothered, or too faint, it is because the sound is either imperfectly distributed to the audience or is lost in waste places. The first may occur in a very low and long room, the second in one with a very high ceiling. The first can be remedied only slightly at best, the latter can be improved by the use of reflectors behind and above the speaker. On the other hand, should the sound be loud but confused, due to a perceptible prolongation, the difficulty arises from there being reflecting surfaces either too far distant or improperly inclined. The most immediate remedy in this case is covering these surfaces with some absorbent material — curtains or hair felting. The lecture room referred to above may be taken in illustration. Hair felting ¾ of an inch thick was placed in the fourteen vertical rectangular places beside the windows, covered with thin tinted asbestos paper, and protected by wire guards. Hair felting 1½ inches in thickness, similarly protected, was placed in the seven vertical, semicircular offsets in the dome. The platform was covered with carpet doubly lined.

The above is a partial account of perhaps the first quantitative experimental investigation of this subject. There is a little more that might be given, and there is a great deal more that might be investigated, but a further research would be laborious and very expensive.

THE GRAND PRIZE OF ROME.

THIS prize, awarded by the French Government to the laureates of an annual competition in architecture, sculpture, music, painting and engraving, dates the year of its foundation back to 1720. Previous to that time the most promising or better *protégéd* of young men students at the Academie des Beaux Arts were pensioned and sent to Rome on an art mission at the expense of the State.

In 1795 the present system of competition was adopted. All Frenchmen under thirty years of age were declared eligible. The successful candidates, to be provided for during a period of four years, lodged at the Villa Medicis in Rome, and otherwise authorized to visit the principal cities of Italy, of Greece and of Asia Minor. At the end of each year some work representative of study or research among the vestiges of ancient monuments to be furnished by each "*pensionnaire*." As concerns the architects, this work always represents an analytical or archæological *étude* of the classics, or the solution of a problem in "Restoration." The sculptors and painters, after a year or two spent in copies from the antique, are at liberty to submit their own compositions; while the musicians are given *carte blanche* to pursue their muse as they think most fitting, and usually spend more of their time in the countries beyond the Rhine than on the banks of the Tiber.

The "Grand Prix" is awarded by a jury composed of members of the Academie des Beaux Arts. As concerns architects the mode of procedure is as follows: A competition is opened to all Frenchmen, the only qualification being that no competitor shall have reached the age of thirty. This competition is of twelve hours' duration. The sixty *best* resulting from this trial are weeded from the others, always several hundred in number, and these sixty are entitled to enter the second concours. This is a twenty-four hour problem, beginning at 9:30 in the morning and finishing at the same time on the following day. Ten men are picked from the sixty, which ten make the final drawings for the prize. Preliminary to the drawings is a four-day sketch, i. e., during four days the chosen ten cannot leave the school. Each man is lodged in a room some twelve by sixteen feet ("*sa loge*"), provided with a wood stove and bed, and there in absolute solitude must work out for himself the solution of the programmes' problem.

At meal time the fellows meet, but not a word is ventured in reference to the competition. In fact, the least allusion to matters architectural is punishable with fines, and the proceeds go into a general fund for a subsequent jubilee dinner.

After *déjeuner* each day the men spend a half hour at ball or some other recreation in the courtyard before resuming work; and evenings after dark they chat and smoke awhile, turning in early. They are not allowed to work with artificial light, and so begin the day with its dawn.

At the end of the four days the sketches are turned over to the authorities, each competitor keeping a tracing of his work. During the following months the men make their finished drawings. A portion of the time is devoted to study at the atelier, but the rendered drawings are made at the school and by each competitor alone and unaided. The work must be entirely his, even to the most minute and timestealing details.

The jury award three prizes. The first, or Grand Prix, goes to Rome; the second and third are moneyed prizes. No candidate can obtain the same prize twice, i. e., if he has been successful in winning both second and third prizes in two years of competition, a third year he is eligible only to the Grand Prix, and if his design is not considered worthy of this he receives no recompense whatever.

The subject of the programme for the Grand Prix of this year was "Un Palais pour les hôtes de France en 1900." M. Chifflot,

élève de Messrs. Daumet, Gérault, Esquier, won the Academie laurels, and goes to Rome this fall. M. Arfvidson stood second, and M. Auburtin third.

The work of M. Hulot, one of the most talented men at the school, merits real interest and appreciation, although it failed to receive any recompense. The plan is clear and straightforward, yet perhaps lacking in qualities of grace and the picturesque, and a trifle cold.

The concours in general is strong and shows a full understanding of the exigencies of the programme. The reproduction from photographs of these drawings can hardly fail to enliven the interest that the profession here has always seemed willing to express for French methods of training.

The Inland Architect purposes to produce from time to time the prize drawings of the most notable competitions abroad, believing by so doing to supply a long-felt want, and thereby develop an understanding of many new problems and the means of their solution.

REAR VIEW OF MOUNT VERNON.

THIRTY-SECOND ANNUAL CONVENTION OF THE AMERICAN INSTITUTE OF ARCHITECTS.

THE thirty-second annual convention of the American Institute of Architects was held in the Arlington Hotel, at Washington, D. C., on November 1, 2 and 3, 1898. The following signed the Secretary's roll of attendance:

New York.—George B. Post, Julius Kastner, John M. Carrère, T. E. Cossman, Charles I. Berg, Edward H. Kendall, William Martin Aiken, and Henry C. Meyer, editor *Architectural Engineering*.

Brooklyn, N. Y.—Edwin F. Lewis, Isaac E. Ditmars, Andrew G. Thompson, A. Porter, L. De Coppet Berg and Walter Dickson.

Pittsburg, Pa.—C. M. Bartberger, Thomas Boyd, T. D. Evans and F. T. Heckett.

Boston, Mass.—W. G. Preston, Edwin F. Lewis, Arthur G. Everett, H. Langford Warren, A. W. Longfellow, Robert D. Andrews and William Rotch Ware, editor *American Architect*.

Chicago, Ill.—W. L. B. Jenney, Samuel A. Treat, Charles S. Frost and Robert Craik McLean, editor *Inland Architect*.

Detroit, Mich.—George D. Mason, John M. Donaldson, James S. Rogers, Frank C. Baldwin, A. W. Chittenden and John W. D. Waldson.

Buffalo, N. Y.—John H. Coxhead, E. B. Green and George Cary.

Utica, N. Y.—Frederick H. Gouge and Jacob Agne.

Bridgeport, Conn.—Edward I. Nickerson.

Indianapolis, Ind.—Bernard Vonnegut and C. A. Wallingford.

Springfield, Mass.—Guy Kirkham.

Cincinnati, Ohio.—James W. McLaughlin, A. W. Hayward, George W. Rapp, Gustav W. Drach, and A. O. Elzner.

Philadelphia, Pa.—Addison Hutton and Frank Miles Day.

Providence, R. I.—Alfred Stone and Edward F. Ely.

Cleveland, Ohio.—Levi T. Scofield and C. F. Sweinfurth.

Columbus, Ohio.—J. W. Yost.

Youngstown, Ohio.—L. Boucherle.

Rochester, N. Y.—J. Foster Warren.

Baltimore, Md.—George A. Frederick, Henry Brauns, J. B. N. Wyatt and E. G. Lind.

Dayton, Ohio.—Robert E. Decker.

Fort Wayne, Ind.—Marshall Simpson Mahurin.

Elmira, N. Y.—J. H. Pierce.

Newark, N. J.—Jeremiah O'Rourke.

Springfield, Ill.—George H. Helme.

Ithaca, N. Y.—A. B. Trowbridge, Arthur N. Gibb.

Washington, D. C.—C. A. Didden, T. F. Schneider, L. J. Smithmeyer, Robert Stead, James L. Taylor, James G. Hill, Ernest Lamb, Frederick B. Pyle and Joseph C. Hornblower.

The convention was called to order by President George B. Post, who introduced the Hon. John B. Wight, president of the board of commissioners of the District of Columbia, who welcomed the members to the city.

The president then addressed the convention as follows:

PRESIDENT'S ADDRESS.

The programme of the thirty-second convention of the American Institute of Architects, as usual, requires that the proceedings shall be opened by an address from your president.

On former occasions I have directed your attention to the unexampled rapidity with which the fine arts have developed in America since the first organization of this association, and to the prominent part taken by the architects in this development; to the growth of the association itself from a body weak in numbers and weaker still in the influence of its members, individually and collectively, to an organization extending over the length and breadth of this enormous country; an organization which has become a recognized power in all questions directly or indirectly pertaining to architectural art.

I have directed your attention to the dangers which menace our art, and to the fact that if true to itself the future of the profession is clearly in the control of this Institute.

I now desire to extend to its members my most hearty congratulations, for although a period of general depression in individual business, the past year has been marked by three events which will form an era in the history of American architecture.

The wise Secretary of the Treasury, the present honored head of that department which is the great builder for the Government, has not only established a most important precedent and practically made a public recognition of the fact that educated talent is essential to economy and success in the work of our profession, but, more important still, that there should be no politics in art; by the appointment of a Supervising Architect after a most careful and exhaustive competitive examination, conducted by a specially appointed civil service commission, consisting of a board of architects of recognized position in their profession.

For almost the first time in the last three decades we have seen architects in private practice selected by fair competition, judged by expert jurors, for the design and erection of governmental buildings. A practical recognition of the fact for years asserted by the unanimous voice of the profession that worthy architecture cannot possibly be secured, except by accident, from a government office, no matter how great the ability of its chief, where the mass of business in the maintenance and repair of existing buildings is so enormous that the work of design is of necessity largely delegated to assistants. Under these circumstances excellence must be at best a lottery.

In all ages and in all countries employment for the design and erection of government work has been the maximum reward of professional distinction. Consequently the structures erected by the government of a country have been generally and properly accepted as the most reliable and decisive proof of the civilization of the period and race by which they were produced.

Alas for the verdict of future ages upon the excellence of the art and civilization of America in the latter half of the nineteenth century, if judged by such monuments as the Pension Building and the Post Office, and the great majority of structures erected from designs prepared in the offices of our government.

Unfortunately these buildings are built with extravagant excellence and will stand for ages a travesty upon the art of the country, a reproach to the intelligence of those in power who have refused to listen to the urgent and repeated opinions of those qualified by education and experience to give advice, and have persistently neglected to use the means always at their hands to procure designs which should at least represent the average skill and economy daily shown by the architects of the country in private practice.

It is the clear duty of this body, the great representative society of American architects, never for an instant to relax its efforts until such time as the creation by the Government of such artistic monstrosities shall be impossible. We have seen by the recent precedent established by the Treasury Department that persistent protest and untiring effort will surely bear its fruit.

This Institute should never pause in its exertions until Congress has passed the necessary amendments to make it mandatory that for the design and construction of each important building to be erected by the Government in any of its departments, there shall be appointed, either directly or by limited competition, an architect whose ability has been thoroughly proved by success in private practice, and that the fees for his services paid by the Government shall be those recognized throughout the civilized

world as the proper and just recompense for such services—the fees rehearsed in the Schedule of Charges of the American Institute of Architects and uniformly paid by individuals and corporations in all of our great business centers.

Provisions should be demanded for the appointment of proper juries of award, composed of experts in the case of all competitions, and to provide for the expenses of each juror as well as for the payment of a moderate and proper fee.

For the first time in its history the Institute has established a permanent headquarters. As is eminently proper, the permanent home of the national organization is located in the national capital.

In the march of events the Institute has outgrown its old code of laws, and under a new constitution you are now called upon to consider a new code of by-laws. It is a matter of regret that so large a part of the time of this convention must be of necessity devoted to this subject, and it is earnestly hoped that your consideration of the question may be so careful and your decisions so wise that the time of future conventions may be free for the discussion of the mass of subjects of more general interest than the minute details of interior organization.

The convention having been declared open for business, the secretary, Alfred Stone, of Providence, Rhode Island, read the following report of the Board of Directors:

REPORT OF BOARD OF DIRECTORS.

Today the Institute enters upon a new era in its history which is fraught with no little anxiety. The step it has taken is without precedent, as no similar society has broken away from the commercial metropolis of the country and established its home in the national capital. It may, therefore, properly be called an experiment, and is one which will depend for its success upon the individual and united efforts of the members of the Institute, and may easily prove to be a failure without such effort. The first way in which it may make itself manifest is by an increase in its membership, which the proposed by-laws, if adopted, will facilitate. It is only by a membership large in numbers and representing the best-equipped members of the profession, who not only combine to a high degree professional skill and training, but exalted views as to the ethics of the profession, that the Institute can realize the full advantage of its mission and reap the benefits of its new departure.

The question of the present home for the Institute has been an ever-recurring subject for consideration, and many years ago an effort was made to procure a building fund, but not until after the passage of the following vote on February 11, 1898, was any real progress made:

"*Voted*, That a commitee of three be appointed by the president to secure a lease of the so-called 'Octagon House,' Washington, D. C., for a term of five years if possible, for a rental not exceeding $360 per year, and with further power to formulate a plan, obtain funds and put the house in condition for occupancy."

It was also voted: "That the committee be authorized to issue debenture bonds of small denominations to an amount not exceeding $5,000, and that the form of the bond is to be approved by the executive committee before issuing the same."

In pursuance of that vote the president of the Institute, in accordance with the instructions of the Board of Directors, appointed Frank Miles Day, Robert Stead and Wilson Eyre, Jr., a committee to procure a lease of the Octagon House, and put it in condition for occupation, and issue bonds to the amount of $5,000 to meet the expense thereof. Today we shall open and enter upon the occupation of our new home, and the enjoyment of the fruits of their labors.

The passage of this vote was the outcome of a report of the Washington Chapter presented to the Board of Directors at that time. Among the advantages set forth in this report were, that it afforded the broadest field for the Institute to obtain national legislation in relation to art and construction; that it could here more efficiently advocate the establishment of a Government testing station and a national architectural museum, and would be in a position to make its influence felt in the methods adopted by the Government for procuring designs for national buildings, which has been so successfully inaugurated under the direction and by order of the Secretary of the United States Treasury, the Hon. Lyman J. Gage, an honorary member of the Institute, and an efficient supporter of the best interests of the profession.

A fuller and detailed history of the movement and its results will be visible at the reception, to take place this afternoon, and will be heard in the report of the chairman of the committee which has so successfully accomplished the task set before it.

At the last annual meeting the conduct of the competition for the Pennsylvania State Capitol furnished an engrossing topic of consideration, but without producing the desired result. In fact, the outcome is, if possible, still more discreditable to the State than was anticipated; but in other quarters several notable competitions have been conducted with fairness and in compliance with ethical rules of practice, although they may not have resulted to the satisfaction of each and every individual competitor, and it is not improbable that the publicity which was given to the action of the Institute in the matter of the Harrisburg Capitol has had even greater effect than if it had resulted in the adoption of the course advised by the Institute.

The more than questionable conduct of the commissioners, the unjust treatment of its professional advisors, the defeat of the machinations of the firm that expected to capture the prize, and the subsequent still more scandalous action of the commissioners, have been an object lesson to show what ends duplicity and unfair dealings may lead, and it is believed that the State of Pennsylvania has but entered upon a gigantic scheme which will extend through many years, and be productive of still other and larger results to the discredit of the State, and with heavier demands upon its treasury. In view of the failure of the Pennsylvania State Capitol competition, and the success of that for the New York Public Library building, it has been suggested by a distinguished member of the New York bar, that the Institute appoint a committee to have power to employ legal counsel, to prepare a form of programme of competitions and have it recognized in legal enactments and ordinances authorizing commissioners to secure an architect by means of competitions. Such an act or ordinance might make it legally incumbent upon a corporate body or even upon a State itself, to pay promised fees, which the State of Pennsylvania successfully dodged, with no legal redress for the architects employed by it. There is, however, something stronger than legal enactments by State or city, and that is a recognition of the unwritten law of ethics which a professional body establishes for its own conduct, and which will be respected by the public, and will be complied with to just that extent with which it is respected by the profession, and complied with by its practitioners. It may be expedient to procure legal enactment; it is imperative that our practice be in accordance with professional ethics.

The letter ballots on the adoption of the amendments to the Constitution have been opened, and it is found that the amendments have been adopted with but eight negative votes out of one hundred and thirty-one ballots sent in.

The consideration of the revised By-Laws will be brought to your attention, and it is trusted that such action will be taken as will save the Institute from the necessity of devoting the time of its annual conventions to changes therein, and will insure a large and permanent increase in the membership of the Institute.

The deaths among the Fellows of the Institute since the Detroit convention have been F. A. Coburn, of Cleveland, Ohio; Alfred Smith, of Chicago, and Elbridge Boyden, of Worcester, Massachusetts. The latter was probably the oldest member on the rolls of the Institute, and contemporary with him was William W. Boyington, of Chicago, a former Fellow of the Institute, who died in Chicago on October 16, in his eightieth year. A memorial and resolution to his memory, prepared by Mr. P. B. Wight, F.A.I.A., has been received from the secretary of the Illinois Chapter.

The death of Oliver C. Smith, a Fellow of the Institute, occurred on December 1, 1896, but was not known to the Secretary until after the publication of the proceedings of the thirty-first convention.

M. Charles Garnier is the only person among the honorary members of the Institute who is known by the secretary to have deceased during the year.

The Board of Directors recommend for election as corresponding members: Prof. W. C. Sabine, of Harvard University; Prof. G. P. Merrill, and Dr. Cyrus Adler, of the Smithsonian Institution.

The treasurer, Samuel A. Treat, of Chicago, Illinois, reported in detail upon the receipts and expenditures of the Institute from September 10, 1897, to October 22, 1898, the total receipts being $3,716.08 and the total expenditures $3,334.01, leaving a balance of $382.07 in the treasury.

FORMAL OPENING OF THE OCTAGON HOUSE.

The secretary read a synopsis of the reports of the several Chapters and called for reports of standing committees.

W. L. B. Jenney, of Chicago, Illinois, chairman of the Committee on Foreign Correspondence, read an interesting report and some correspondence.

H. Langford Warren, of Boston, Massachusetts, chairman of the Committee on Education, requested further time to prepare his report. When presented it was as follows:

REPORT OF THE COMMITTEE ON EDUCATION.

Your committee conceives it to be its principal duty to serve as a medium of communication between the technical schools and the profession, to collect as far as possible the facts with regard to the organization, numbers, etc., of the schools and to lay these facts before the Institute with such considerations as they seem to suggest. The chief part of this report consists, therefore, as last year, of a table of statistics, the figures in which have been furnished by the schools themselves.

These statistics fall into two parts: First, that relating to the numbers of students; and second, that relating to the arrangements of studies in the several curricula.

The statistics with the regard to numbers contain a somewhat striking series of facts. In the first place it appears that since the establishment of the first architectural school in this country at the Massachusetts Institute of Technology in 1869 under Professor Ware, now at the head of the school at Columbia University, there have been, as nearly as can be ascertained, some 3,250 students of architecture in the several schools up to the present time. As the numbers in the early days at the Massachusetts Institute and at Illinois (but little younger than the Institute of Technology) were small, it would appear that some 3,000 students have been in the schools since the opening of the department at Columbia in 1881. Of the total number about 650 have graduated, of whom about 120 are reported as being now in practice. The younger graduates are of course for the most part still draftsmen in offices. But few of the graduates withdraw from the profession and the probability seems to be, as far as can be gathered from careful inquiry, that fully three-fourths, perhaps four-fifths, of those who graduate from the schools become practicing architects.

At the present moment there are reported about 537 students as being in the schools. The reports as to the number of graduates are in some cases incomplete, but it would appear that about seventy young men graduated from the schools of architecture last year.

In addition to the educational advantages offered by the regularly established departments of architecture at these institutions of learning, the activities of the architectural clubs, the draftsmen's clubs, throughout the country have to be taken into consideration. These clubs are in many cases doing very valuable work and are highly useful educational agencies, which especially deserve the encouragement of the profession as they are established and maintained mainly by the zeal and energy of the young draftsmen themselves. Then there are in New York ateliers (the atelier Masqueray, the atelier Friedlander) organized in imitation of those at Paris, and brought into being especially by the education committee of the Beaux Art Society of New York and the systems of competitions which it has established. These competitions form another valuable factor in the architectural education of the country, especially benefiting, as they do, those who have not been able to get a regular school training or young graduates of the schools who are now draftsmen in offices. The ateliers above referred to are occupied exclusively with architectural design.

The statistics which accompany this report have led to the following conclusions, which it is desired earnestly to urge upon the attention of the Institute and of the schools respectively.

It seems to your committee that the above facts manifestly point to the practicability and expediency of establishing a standard of professional training to be tested either by direct examination of candidates by the Institute itself, or by diplomas of recognized architectural schools, as a *sine qua non* of admission to the ranks of the Institute. The Royal Institute of British Architects has been forced into the adoption of such a system, and it is now working well and proving of great benefit to the profession and to the public. It will be observed that the number of students at this moment in the schools nearly equals the whole membership of the Institute, and that the schools are now

turning out graduates in architecture at the rate of about one-eighth of the membership of the Institute every year. It would seem, therefore, to be a very easy matter to establish a system of admission to the Institute by examination or diploma such as is here suggested. It is obvious that from now on there will be a sufficient number of thoroughly trained architects to do the architectural work of the country. In addition to requirements now existing, such a standard of admission would give new meaning and value to membership in the Institute. It would be an aid to the public in enabling them to secure competent professional service. It would strengthen the Institute; it would strengthen the schools; it would tend to raise the standard of the profession, and it would tend to discourage incompetent and untrained men from establishing themselves. It would give a new aim to the schools by giving their efforts new recognition. It is obvious that the profession is in danger of overcrowding, and the efforts of the Institute ought to be in the direction of overcoming this difficulty by raising the standard of admission to its ranks and by securing general recognition of the standard which it sets up.

The facts above cited will suggest also to the schools the desirability of gradually raising the standard of graduation. Moreover, the four years of training now so general is too short. The better schools are already aiming to increase this to five years by the addition of a post graduate year, and this salutary tendency ought in every way possible to be encouraged by the Institute. The establishment of graduate scholarships in the schools would aid in bringing this about and is very much to be desired.

The second part of the statistics herewith submitted shows by percentage the approximate proportion of the time devoted in the several schools to the groups of subjects mentioned. The subdivision and treatment of subjects is so different in different schools that this grouping of subjects promised to give a more valuable comparison than a more detailed consideration of the curricula. Under the heading "Mathematics and Construction," is included the necessary preliminary mathematics and mechanics, strength of materials, structural design, structural detail, heating, ventilation, etc. Under the heading "Architectural History" is included also the general history of the fine arts in some institutions. Under general studies are usually found English, French, German, archæology, physics and chemistry; in some cases hygiene and military drill even are included.

In conclusion, your committee desires to ask members of the Institute and the schools for suggestions as to information they would like to have obtained, or as to any means by which the committee may make itself useful to the cause of architectural education, especially by bringing the Institute into closer relations with the schools, so that their work may be better understood, and that they may feel the stimulus of constant and close relations with the profession.

The committee desires especially to urge the Chapters of the Institute in the localities where schools are established to increase the active interest of the Chapters in the schools which already in most cases so pleasantly exists.

Respectfully submitted. For the Committee,
(Signed) H. LANGFORD WARREN, Chairman.

Frank Miles Day, of Philadelphia, presented his report regarding the preparation of the Octagon House as a substitute for his report as chairman of the Committee on Publication and Library, which was as follows:

As chairman of the Committee on Publications and Library, I beg to report that no meeting of the committee has been held, as no useful purpose would be subserved by bringing the members together. So far as the library is concerned, it is in the condition shown by the report of the committee last year. As soon as the Octagon House shall have been put in repair the committee will endeavor to get together all the books and papers of the Institute, and will, with the approval of the Board of Directors, fit up a suitable library in that building.

Regarding the relations of this committee to the publications of the Institute, we would say that the publications appear to consist entirely of the annual report, which is so adequately prepared by the secretary that the relation of the committee on publication in regard to it is merely *pro forma*.

No report was received from R. M. Upjohn, chairman of the Committee on Conservation of Public Buildings.

Reports from special committees were called for.

George B. Post, chairman of the Committee on Government Architecture, referred to the president's address as his report. No report was received from Daniel H. Burnham, of Chicago, chairman of Committee on National Building for the Institute, nor from T. M. Clark, of Boston, chairman of Committee on Building Laws.

James B. Cook, of Memphis, chairman of Committee on Applied Arts and Sciences, was not present, but sent as a substitute for such report a paper on the "Ascendancy of Domestic Art and the Decline of Ecclesiastical Art During the Last Half Century," which the chair ruled it was not proper to read at that period in the proceedings.

Alfred Stone, delegate to the National Conference on Standard Electrical Rules read the following report:

REPORT OF THE DELEGATE TO THE NATIONAL CONFERENCE ON STANDARD ELECTRICAL RULES.

The delegate from the Institute to the National Conference on Standard Electrical Rules attended, by invitation of the electrical committee of the National Underwriters' Association, a meeting of said committee and took part in its deliberations and the consideration of the National Electrical Code.

It is the desire of the conference that the Institute shall elect a delegate to represent it at future meetings of the conference, or of the Electrical Committee of the Underwriters' Association, for the purpose of taking part in the deliberations for the amendment of the Code, as occasion may require.

There has been no expense incurred on account of the representation during the past year. (Signed) ALFRED STONE,
Delegate to the National Conference on Standard Electrical Rules.

Robert D. Andrews, of Boston, chairman of the Committee to Revise Constitution and By-Laws, presented the printed draft of the same as his report, stating that the Constitution had been adopted by ballot vote and that the By-Laws would be discussed by the convention.

No other reports were received, and the report of the Committee on Constitution and By-Laws was taken up, and the discussion occupied the remainder of the session and the entire evening session. The committee consisted of Robert D. Andrews, of Boston, chairman; George Keister, of New York, and George C. Mason, of Philadelphia.

No business of importance other than the above came before the convention, except the reading and discussion of papers, and in conclusion the several amendments to the By-Laws were recorded, and the committee instructed to edit and finally revise the draft.

The papers read were as follows:

"Acoustics," by Prof. W. C. Sabine, of Harvard University, followed by a communication upon the same subject by Adolph Chess, of Washington, D. C.

"Some Peculiarities of Timber," by B. E. Fernow, Dean of the New York State College of Forestry.

"Remarks Upon Some Little Known Ornamental Stones," by Prof. G. P. Merrill, of the United States National Museum. This paper was illustrated by a large number of samples of stone, and by stereopticon pictures.

"The Place to be Assigned to the Jewish People in Architectural History," by Dr. Cyrus Adler, of the Smithsonian Institution. This was finely illustrated by stereopticon pictures.

"General Practice in Regard to the Employment of Electric Heating and Sanitary Engineers," by R. D. Bradlee, of Boston.

The committees of three appointed to prepare tickets for the election of officers and directors, were J. W. Yost, A. W. Longfellow, Jr., and C. M. Bartberger; and Edward I. Nickerson, C. A. Wallingford and E. H. Kendall.

The officers and directors elected were as follows:

OFFICERS.—President, Henry Van Brunt, of Kansas City, Mo.; first vice-president, W. L. B. Jenney, of Chicago; second vice-president, James W. McLaughlin, of Cincinnati, Ohio; secretary and treasurer, Glenn Brown, of Washington, D. C.; auditor for two years, Samuel A. Treat, of Chicago; auditor for one year, Edward H. Kendall, of New York.

DIRECTORS.—For one year: Frank Miles Day, of Philadelphia, T. D. Evans, of Pittsburg, Pa., and Joseph C. Hornblower, of Washington, D. C.; for two years: Robert W. Gibson, of New York, Levi T. Scofield, of Cleveland, and W. M. Pointdexter, of Washington, D. C.; for three years: George B. Post, of New York; Arthur G. Everett, of Boston, Mass., and W. C. Smith, of Nashville, Tenn.

The convention concluded with a vote of thanks to the Washington Chapter and the Entertainment Committee, the Cosmos Club, to Mr. Charles Ffoulke, the custodian of the National Library, for courtesies received, and to the newspapers that had made full and accurate reports of the proceedings of the convention. This latter applied distinctly to the Washington *Post*.

THE LAST PICTURE.

BY RUDYARD KIPLING.

When earth's last picture is painted,
And the tubes are twisted and dried;
When the oldest color has faded,
And the youngest critic has died,
We shall rest. I' faith we shall need it;
Lie down for an æon or two,
Till the Master of all good workmen
Shall call us to work anew.

And they that are good shall be happy;
They shall sit in a golden chair,
And splash on a ten-league canvas
With brushes of camel's hair.
They shall have real saints to draw from:
Magdalen, Peter and Paul;
They shall paint for ages and ages
And never get tired at all.

And only the Master shall praise them,
And only the Master shall blame;
And no one will work for money,
And no one will work for fame;
But each for the joy of the working,
And each in his separate star
Shall draw the thing as he sees it
For the God of things as they are.

NEW PUBLICATIONS.

INSPECTION OF MATERIALS AND WORKMANSHIP EMPLOYED IN CONSTRUCTION. By Austin T. Byrne. New York: John Wiley, 1898.

This book is a compilation, the materials being drawn from many sources. There is nothing in it novel or original, but, through it, access may be had readily to information that might not, perhaps, be otherwise easily found. Those engaged in the construction of buildings will find it of use, it being specially adapted for them.

OUTLINES OF RURAL HYGIENE. For Physicians, Students and Sanitarians. By Harvey B. Bashore, M.D., Inspector for the State Board of Health of Pennsylvania. With an appendix on The Normal Distribution of Chlorine, by Prof. Herbert E. Smith, of Yale University. Illustrated with twenty (20) engravings; 5½ by 8 inches; pages vi-84; extra cloth, 75 cents net. The F. A. Davis Company, publishers, 1914-1916 Cherry street, Philadelphia; 117 West Forty-second street, New York City; 9 Lakeside Building, 218-220 South Clark street, Chicago, Ill.

This little volume is exactly what its title indicates, a compendium of useful, scientific information adapted to rural conditions, where water service and efficient systems of sewerage are generally lacking. While there is little regarding sanitary conditions that is absolutely new, yet the presentation of old established facts in so concise a manner makes this publication a valuable addition to hygienic literature. The logical arrangement of the subject matter in relation to water supply, waste disposal, control of soil conditions, as well as the minutia of heating and ventilating habitations, is to be commended. The chapter on the subject of a proper disposal of the dead, is worthy of a careful perusal. The article by Prof. Herbert E. Smith on the "Normal Distribution of Chlorine," treats the subject from a scientific point of view, and presents some new matter in relation to the saline character of water as found in springs, streams, lakes, etc. The importance of

pure drinking water, and the problem of securing it, makes this chapter of the book especially valuable. The engravings are effective in conveying correct mental impressions. The mechanical work as to typography and binding is good.

SANITARY ENGINEERING, by Wm. Paul Gerhard, C. E., consulting engineer for sanitary works. Published by the author, 36 Union Square East, New York.

"Sanitary Engineering," by William Paul Gerhard, C. E., is a recent addition to scientific trade literature. Mr. Gerhard is eminently well qualified to handle this important subject, and he has given it careful attention. A scope of observation covering three continents has given the author a fund of information of a cosmopolitan character, and the book gives ample evidence of this fact. The methodical arrangement of the topics makes the small volume valuable for ready reference. In addition to a presentation of the underlying principles of correct sanitary conditions, the author lays particular stress on the training and necessary qualifications of one who assumes to be a sanitary engineer. His expressed idea is that fitness in such an official requires something more than a knowledge of plumbing and house draining. He makes a plea for the specialist, and not inaptly refers to the fact that mediocrity is no longer at a premium.

OUR ILLUSTRATIONS.

The Effingham, E. C. Van Leyen, architect, Detroit, Michigan.

Summer Residence for Mr. Elmer Grey, architect, Fox Point, Wisconsin.

United States Post Office, Washington, D. C., United States Supervising Architect.

Onondaga County Savings Bank, Syracuse, New York. R. W. Gibson, architect, New York City.

B. P. O. Elks Club, Akron, Ohio. F. O. Weary, architect. Reception Hall and Lodge Room are shown.

Residence of G. E. Hamilton, Washington, D. C. L. E. Dessez, architect. View of exterior and of Stairway Hall are shown.

Competition for the Grand Prize of Rome; a Palace for the Reception of Sovereign Guests, Exposition of 1900. Grand Prize Design by M. Chifflot; Second Prize Design by M. Arfvidson; Third Prize Design by M. Auburtin; Mentioned Design by M. Hulot.

Photogravure Plate: View in Hall, Residence of George Headley, Detroit, Michigan. Nettleton & Kahn, architects.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure Edition.

Residence of Mrs. Harris, Detroit, Michigan. Rogers & Macfarlane, architects.

Residence of Mrs. Owen, Detroit, Michigan. Rogers & Macfarlane, architects.

Residence of George Headley, Detroit, Michigan. Nettleton & Kahn, architects. An exterior view and views in dining room and library are shown.

The Sherry Building, Forty-third street and Broadway, New York City. McKim, Mead & White, architects. A general view and detail of entrance are shown.

ASSOCIATION NOTES.

CHICAGO ARCHITECTURAL CLUB.

The annual meeting of the Chicago Architectural Club was held October 3. The following officers were elected: President, Joseph C. Llewellyn; first vice-president, A. G. Zimmerman; second vice-president, Henry K. Holsman; secretary, N. Max Dunning; treasurer, August C. Wilmanns. Executive committee: For one year, H. Von Holst and W. Eggebrecht; for two years, Henry W. Tomlinson and Charles Hatzfeld; for three years, Birch B. Long and Charles A. Carr.

T-SQUARE CLUB'S EXHIBITION.

The architectural exhibition of the T-Square Club, of Philadelphia, this year is to have a display of the designs of prominent foreign architects. Paul A. Davis is now in Europe making arrangements for this display. It is proposed to have photographs taken of the best designs of these architects, which are to be enlarged to the size desired. Besides being shown in Philadelphia, these enlarged photographs will be exhibited in other large cities.

PROVINCE OF QUEBEC ASSOCIATION OF ARCHITECTS.

The eighth annual convention of the Province of Quebec Association of Architects met at Montreal November 3 and 4. The following officers were elected: President, A. Raza; first vice-president, S. H. Capper; second vice-president, G. E Tanguay; secretary, Joseph Venne; treasurer, N. E. Doran; auditors, A. Chausse and Mr. Heliot; councilors, A. T. Taylor, G. A. Monette, and Messrs. Archibald and Peachy.

BUFFALO CHAPTER, A. I A.

The Buffalo Chapter of the American Institute of Architects, on October 7, elected the following officers: President, George Cary; first vice-president, James A. Johnson; second vice-president, U. G. Orr; secretary, F. H. Loverin; treasurer, Carl Schmill.

The following standing committees have been appointed: On State Laws and Public Bureaus of Architecture — E. A. Kent, E. B. Green, Carl Schmill; on State and City Buildings and Health Laws—W. S. Wicks, R. A. Bethune, U. G. Orr; on Municipal Art—F. A. Whelan, R. A. Waite, George Cary; on Exhibitions, Publications and Library — F. H. Loverin, J. A. Johnson, R. A. Wallace; on Professional Practice and Competition — Williams, Lansing, George Cary, E. A. Kent; Auditing Committee — W. L. Fuchs, M. G. Beirel, Jesse Porter.

NOTES FROM FOREIGN EXCHANGES.

THE United States Consul at Chemnitz, Saxony, writes as follows to the *Textile World*, of Boston:

"I see that you take a very great interest in technical education, and shall send you soon some of the best works or pamphlets, published thus far on this subject, namely: Report of the Parliamentary Recess Committee, and a report of an English commission. In my opinion, the people of the United States will solve the question of tariff legislation beyond the power of politicians the day they are given technical and industrial art schools, such as one sees in Germany, France and elsewhere on this continent. It is time to urge their great advantages on the American people. As a Boston boy by birth, loving the grand old Commonwealth, I confess feelings of pride in the steps that have been taken to forward technical education in Massachusetts.

"This Old World is doing wonders in the way of technical, industrial, and industrial art schools. Even Switzerland, hundreds of miles from the sea, exports enormous quantities of manufactured goods, because she has built up and maintains a most excellent system of technical education. How much these aid manufacturers, the history of Swiss and German progress proves. The little republic has some of the very best scientific and trade schools in Europe. St. Gall gives the United States and other countries millions of dollars' worth of lace goods, because St. Gall has one of the very best lace schools in the world. The work done by the boys and girls that go out of this school would be remarkable, were it not for the fact that French and German schools are doing work equally good. Switzerland had, in 1896-97, thirteen trade schools in active operation. These are not only supported by the State, but scholarships are granted to deserving lads and lassies. Particularly bright boys and girls are not only given a chance to get all that schools like St. Gall or Zurich can afford them, but are sent to Paris, Lyons or Milan, to see and get as much as the great schools of other manufacturing centers supply. Nor is it the needs of huge cities alone that are looked after. The smallest place in the republic is not too small for the intelligent and fostering care of the commonwealth. In Switzerland they have schools for every industry, and, many times, schools for different branches of the same industry. Not what we are, without such schools, but what we would have been had we had them, or might be with them. Not what the Swiss, French and Germans are with them, but what they would have been, or would become, without them, are the questions to ask and answer. 'The nation that has the schools has the future,' was one of Bismarck's best and favorite aphorisms."

THE PARIS EXPOSITION.

The report recently sent to the president contains much information relative to the work already accomplished for the great Exposition, and relative to the methods now being followed by the administration. On the subject of the technical staff the following passage may be quoted:

"The technical staff, composed of engineers, architects and those placed directly under their orders, comprise actually 204 persons. The greatest latitude has been left to each head or chief in the choice of his assistants and coworkers, and to the present time all have been appointed when asked.

"In accordance with precedents, the compensation given to this staff is relatively small, since it does not exceed 1,000 francs per month even for architects who have charge of buildings reaching a cost of several millions.

"Of well-known talent, and owing their appointments to this very reputation, the heads of the departments find their remuneration in this very fact, so that the ardor which is put into the work of the government requires no other pay. It might be added that the very skillful division of work made by M. Bouvard among the twenty-three architects who obtained prizes in the two competitions has added very materially to the success, since it has the very unusual merit of being apparently satisfactory to almost everyone."

The old administration buildings on the Avenue de la Bourdonnais having become entirely inadequate, new ones have been built which are very large, but with the greatest economy possible the total expense has exceeded $90,000.

The construction of the new palace of the Champs-Elysees and of the Alexander III bridge are being pushed ahead rapidly. In order that the details of carving and ornamentation might be executed in the most satisfactory manner, plaster models have been ordered for such work upon the large palace, the small art palace and the bridge, which will cost over $8,000.

The large palace, by its general appearance, is closely connected with the finest periods of French architecture; its classical lines, moreover, best corresponding to the interior arrangement. The style of the decoration, the colored frieze and the details of the ornament introduce new and desirable elements into a building which is to form a connecting link between the masterpieces of past periods and the manifestations of modern art. The foundations were completed some time ago and the work is now above

the inclosing fences, so that the promenaders on the Champs-Elysees can follow the daily progress. The expenditures, estimated for this building, are now placed at 8,536,844 francs [about $1,650,000]. It is expected that the rough work will be completed and building inclosed by the end of this year. There will thus remain nearly an entire year for the finishing and decoration of the interior so as to be ready for occupancy at the end of 1899.

The "little palace" is progressing rapidly and also is expected to be inclosed by the end of this year and finished in 1899. The total expense already under contract is 2,278,517 francs [about $450,000].

Studies for the buildings which are to be erected along the banks of the Seine for the World's Congresses, for Horticulture, Navigation, Commerce, Forestry, etc., are now nearly completed, and promise to form a most beautiful and decorative group of buildings. Especially the building devoted to the army and navy gives evidence of unusual interest.

All the buildings are now definitely decided upon, and the total reaches approximately the sum of $10,000,000.— *La Semaine des Constructeurs.*

SYNOPSIS OF BUILDING NEWS.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than $5,000 are not published.

Chicago, Ill.—Architect Henry C. Koll: For Richard Hagan, two two-story, basement and attic residences, 25 by 40 feet in size; to be built at 738 and 740 Cullom avenue, Ravenswood; they will have pressed brick and stone fronts, hardwood interior finish, mantels, sideboards, hot-water heating, gas fixtures, the best of plumbing, cement basement floor and sidewalks, etc.; cost $10,000.

Architect Reuben A. Deuell: For Lloyd J. Smith, a two-story, basement and attic residence, 40 by 71 feet in size; to be erected at 2005 Sheridan road; buff Bedford stone front, oak interior finish, the nickel-plated open plumbing, gas and electric fixtures, gas ranges, etc.; cost $20,000.

Architect Charles Thisslew: For S. T. Gunderson, eight two-story flat buildings, 22 by 50 feet each in size; to be built at 2189, and 2194-2210 Van Buren street; pressed brick and stone fronts, oak and pine interior finish, furnaces, plumbing, mantels, gas fixtures, etc.

Architect J. L. Lachiere: For Z. De St. Aubin, a six-story warehouse, 20 by 101 feet in size, at 456 South Clark street; pressed brick and stone front, mill construction, gas fixtures, steam heating, elevators, electric light, cement work, etc.

Architect W. L. Klewer: Making plans for the Dewey apartment house, 40 by 56 feet in size; to be erected at California avenue near Palmer avenue; to be of Bedford stone and pressed brick, have the best of open plumbing, gas and electric fixtures, steam heating, electric light, hardwood finish, mantels, sideboards, etc.

Architect James R. Torrance: For William Pulford, a three-story flat building, 25 by 80 feet in size; to be built at Garfield boulevard near Wentworth avenue; Bedford stone front, oak and pine finish mantels, sideboards, steam heating, gas fixtures, etc. For William Stevenson, a three-story flat building, 50 by 78 feet in size; to be erected at 4435 Lake avenue; Bedford stone front hardwood finish, gas and electric fixtures, mantels, sideboards, electric light, etc. For William Henry Patterson, three three-story residences, 58 by 60 feet in size; to be erected at Fifty-fourth place between Ellis avenue and Greenwood avenue; pressed brick and stone front, hardwood finish, steam heating, gas and electric fixtures, mantels, gas ranges, etc.

Architect C. R. Adams: For F. L. Johnson, six two-story residences, 22 by 45 feet in size; to be built at 2317 to 2381 Magnolia avenue; Bedford stone fronts, modern open plumbing, gas fixtures, oak and pine finish, mantels, furnaces, gas ranges, etc.

Architect Clinton J. Warren: For S. Harper, remodeling Harper House at Rockland, Illinois; will make new entrance, put in new plumbing, electric light, structural and ornamental iron, marble and mosaic work, steel beams, steam heating, elevator, cement work, etc.; cost $25,000.

Architect J. H. Wagner: For E. H. VanIngen, an eight-story factory, 47 by 157 feet in size, at 189 to 191 South Canal street; pressed brick and stone front, elevators, electric light, steam heating, engines, boilers, dynamos, etc.; cost $80,000.

Architect John Duncan: For Charles E. Bartley, a four-story apartment house, 46 by 98 feet in size; to be erected at 4015 to 4017 Grand boulevard; Bedford stone front, hardwood interior finish, mantels, sideboards and consoles, gas and electric fixtures, steam heating, marble, tile and cement work, electric light, gas ranges and fireplaces.

Architect J. G. Simpson: For C. D. Armstrong, two three-story flat buildings, 23 by 80 feet each in size; to be erected at 4400 to 4402 Vincennes avenue; Bedford stone fronts, hardwood finish, gas and electric fixtures, steam heating, gas ranges and fireplaces, marble, tile and cement work, electric light, mantels, sideboards and consoles.

Architect Wilmore Alloway: For Mrs. M. L. Brown, three two-story flat buildings, 20 by 63 feet in size, each; to be erected at 5440 to 5442 Drexel avenue; Bedford stone fronts, oak and pine finish for interior, mantels, sideboards, gas fixtures, furnaces, gas ranges, tile and marble work, electric bells, etc.

Architects Doerr Brothers: For George Carr, two three-story flat buildings, 50 by 80 feet in size; to be erected at 6440 to 6442 Monroe avenue; Bedford stone fronts, hardwood interior finish, gas and electric fixtures, steam heating, electric light, mantels, sideboards, marble and tile work, etc.

Architect Simeon B. Eisendrath: Has commenced work on the ten-story office building, at Dearborn street near Van Buren, for William Stein (Schoneman building); the front will be of pressed brick with terra cotta trimmings, steel construction, have elevators, steam heating, electric light, marble, tile, cement and mosaic work, etc. Same architect is letting contracts for the three-story apartment house, 100 by 175 feet in size, to be erected at Forty-ninth street and Vincennes avenue; it will have two fronts of pressed brick and stone, the best of modern plumbing, gas and electric fixtures, hardwood finish, mantels, sideboards, consoles, hall trees, electric light, gas ranges, etc.

Architects Franklin P. Burnham & Co.: For Joseph Sears, two two-story, basement and attic frame residences, 39 by 48 and 30 by 40 feet in size; to be built at Kenilworth; brick basement, oak finish, mantels, sideboards, furnaces, gas fixtures, gas ranges and fireplaces, tile bathrooms, etc.

Architect Niels Buck: Made plans for two two-story residences, 22 by 52 feet in size, each; to be built at Eastwood avenue, Ravenswood; Bedford stone fronts, oak and pine finish, gas fixtures, mantels, sideboards, hot-water heating.

Architect Henry Ives Cobb: Made plans for four two-story residences, 18 by 53 feet in size, each; to be erected at 1309 to 1311 Waveland avenue, for the Chicago Lutheran Seminary; pressed brick and stone, the best of modern plumbing, steam heating, electric light, hardwood finish, mantels, tile bathrooms, etc.

Architect C. M. Almquist: Made plans for a four-story apartment house, 50 by 60 feet in size; to be erected at Sedgwick street near Oak street; first story and basement to be of buff Bedford stone, and above this will be of buff pressed brick with Bedford stone trimmings; will put in oak and pine finish, steam heating, electric light, mantels, sideboards, gas fixtures, etc.

Architect Frederick Ahlschlager: For N. A. Mayer, a two-story store and flat building; to be built at the corner of Emerald avenue and Sixty-ninth street; pressed brick and stone front, modern plumbing, steam heating, gas fixtures, mantels, sideboards, etc. For Leopold Mayer, addition to residence at corner of Groveland avenue and Thirty-second place; pressed brick and stone, plumbing, gas fixtures, hot-water heating, mantels, sideboards, etc. For Otto Smith, remodeling two-story flat building at 5652 Wentworth avenue; new plumbing, gas fixtures, mantels, sideboards, etc.

Architects Wilson & Marshall: For Frank P. Epps, two three-story residences, 41 by 80 feet in size; to be erected at the southeast corner of Grand boulevard and Forty-fifth street; Bedford stone fronts, hardwood finish, specially designed mantels, sideboards, consoles and hall trees, gas and electric fixtures, gas ranges and fireplaces, electric light, etc. For Moses Bensinger, a three-story residence, 30 by 80 feet in size; to be erected at Drexel avenue between Forty-sixth and Forty-seventh streets; Bedford stone front, hardwood finish, mantels, sideboards, gas and electric fixtures, steam heating, marble, tile and mosaic work, gas ranges and fireplaces, etc.

Architects Holabird & Roche: Have commenced work on the McCormick buildings at 128 to 133 Michigan avenue; they will be six and seven stories, 168 feet front and 160 feet deep, have pressed brick fronts, with stone and terra cotta trimmings, steel construction, elevators, steam heating, electric light, etc. For P. H. McNulty, a two-story, basement and attic residence, 34 by 35 feet in size; to be built at 2506 Lakewood avenue; frame and plaster, hardwood finish, mantels, sideboards, electric light, steam heating, nickel-plated plumbing, etc.

Architect Ira C. Saxe: For Charles S. Dickinson, a two-story, basement and attic residence, 30 by 50 feet in size; to be built at Forest avenue, 50 feet south of Lincoln place, Evanston; frame, stone basement, hardwood finish, mantels, sideboards, consoles, furnace, open plumbing, etc. Also three-story warehouse to be erected on Kinzie street; pressed brick and stone front, the necessary plumbing, steam heating, etc. For E. L. Springer, three two-story residences, 75 feet front and 50 feet deep; to be erected at 3810 to 3816 Forest avenue; pressed brick and stone fronts, furnaces, open plumbing, gas fixtures, mantels, sideboards, etc.

Architect Fred W. Thomsen: For William Kulz, a two-story, basement and attic residence, 28 by 50 feet in size; to be built at 1046 Bryn Mawr avenue, Edgewater; pressed brick and stone, hardwood finish, mantels, sideboards, gas and electric fixtures, furnace, gas ranges and fireplaces, etc.

Architects Huehl & Schmid: For H. F. Lundgren, two two-story, basement and attic residences, 21 by 60 feet, each; to be erected at 1437 Lawrence avenue, Ravenswood (East); pressed brick and stone fronts, hardwood finish, mantels, sideboards, furnaces, gas fixtures, etc.

Architect Frank B. Abbott: For W. H. Stewart, a three-story and basement apartment house, 50 feet front, to be erected at Drexel avenue and Sixty-sixth street; Bedford stone front, modern plumbing, gas and electric fixtures, steam heating, electric light, etc.

Architect C. H. Starnfield: For John Krietenstein, a two-story double apartment house, 50 by 50 feet in size; to be erected at the corner of Fifty-sixth street and Tremont; pressed brick and stone front, hardwood finish, mantels, sideboards, gas and electric fixtures, steam heating, cement basement floor and sidewalks, marble and tile work, gas ranges, electric light, electric bells, etc.

Architect Joseph T. Fortin: For Mrs. Margaret M. Grannan, a two-story residence, 25 by 48 feet in size; to be built at Flournoy street, near Douglas Park; Bedford stone front, oak finish, mantels, sideboards, furnace, gas fixtures, electric bells and speaking tubes.

Architect Fritz Foltz: Made plans for a three-story and basement school, 69 by 100 feet in size; to be erected at 120 to 126 Erie street; pressed brick and stone front, oak and pine finish, plumbing, steam heating, electric light; cement work, etc.; cost $35,000. For H. W. Lewinsohn, a two-story, basement and attic residence, 30 by 84 feet in size; to be erected at 1968 Deming court, near the park; stone basement, pressed brick and terra cotta trimmings above, fine hardwood finish, special mantels sideboards, gas and electric fixtures, steam heating, electric light, etc. For August Bohe, a three-story flat building, 25 by 56 feet in size; to be built at 1127 Seminary avenue; pressed brick and stone front, modern plumbing, gas fixtures, steam heating, mantels, sideboards, etc.

Architects Barfield & Hubbel: For Mrs. Knauer, a four-story apartment house, 60 by 167 feet in size; to be erected at the corner of Clark street and Oakdale avenue; it will be of pressed brick front with buff Bedford stone trimmings, have hardwood interior finish, mantels, sideboards, gas and electric fixtures, steam heating, electric light, cement basement floor and sidewalks, electric bells, speaking tubes, gas ranges and fireplaces. Same architects made plans for remodeling Fullerton avenue and Larrabee street church; will put on a new cut-stone front extending out 40 feet, slate roof, oak interior finish, electric light, steam heating, toilet rooms, stained glass, cement work, plumbing, etc

Architects Bishop & Co.: For M. Johnson, a block of stores, 50 by 118 feet in size; to be erected at Forty-third street and Ellis avenue; to be of pressed brick, plate glass, iron store fronts, plumbing, gas fixtures, steam heating, cement basement floors and sidewalks, etc.

Architect Myron Hunt: For J. E. Nolan, a two-story and attic residence; to cost $6,000; to be erected at 930 Michigan avenue, Evanston; to be of frame construction, have stone basement, oak trim, nickel-plated plumbing, gas and electric fixtures, mantels, sideboards, heating, tile bathrooms, marble work, cement basement floors and sidewalks. For John R. Woodbridge, a two-story and basement residence; to cost $6,500; to be erected at Asbury avenue, Evanston; frame, brick basement, hardwood interior finish, mantels, sideboards, the best of sanitary improvements and heating, electric light and bells, gas ranges and fireplaces. For Alderman Arthur W. Underwood, a two-story, basement and attic frame residence; to cost $4,500; to be erected on Wesley avenue, Evanston; brick basement, oak and pine interior finish, mantels, sideboards, gas fixtures, modern open plumbing, gas ranges and fireplaces, electric bells and speaking tubes.

Architect Charles A. Strandel: For A. Nelson, a three-story flat building, 37 by 67 feet in size; to be erected at Halsted street near Belmont avenue; to have a front of buff Bedford stone, oak and pine finish, modern plumbing, steam heating, gas fixtures, mantels, sideboards, electric wiring, etc. Also making plans for a three-story store and flat building; to be erected on Sheffield avenue near Noble avenue; Bedford stone front, galvanized iron bays and cornices, the modern plumbing, gas and electric fixtures, oak and Georgia pine interior finish, steam heating, mantels, etc. Same architect is making plans for a two-story flat building, to be erected at 127 North Fiftieth court; to have a front of stone and pressed brick, galvanized iron bays and cornice, gas fixtures, steam heating, electric wiring, mantels, sideboards, oak and Georgia pine interior finish, cement basement floors and sidewalks, electric bells and speaking tubes, electric wiring.

Architect H. J. McMullen: Making plans for a three-story and basement apartment house to contain eighteen apartments; to be erected at Harrison street and Douglas boulevard; pressed brick and stone front, hardwood finish, mantels, sideboards, steam heating, the best of modern plumbing, electric wiring, etc.

Architect J. T. W. Jennings: For Charles Cole, a handsome country residence, 38 by 100 feet in size; to be erected at Oconomowoc, Wisconsin; frame, stone basement and chimneys, oak finish, electric light, hot-water heating, modern plumbing, gas ranges and fireplaces, etc.

Architect J. D. Chubb: For L. G. Steubing, a two-story and attic residence, 25 by 50 feet in size; to be built at Stewart Ridge, West Pullman; frame, stone basement, hot-water heating, oak and Georgia pine finish, mantels, sideboards, gas fixtures, cement sidewalks, etc.

Architect Harold Flower: For Gooding & Campbell, a four-story apartment house, 30 by 113 feet in size; to be erected at 266 Warren avenue; Bedford stone front and pressed brick and stone on the side, tile roof, the best of plumbing, steam heating, electric light, mantels, etc.

Architect Julian Barnes: For Mrs. Diana R. Chaffee, three-story and basement apartment house, 50 by 126 feet in size; to be erected at the corner of Wabash avenue and Twenty-eighth street; stone and pressed brick, electric light, steam heating, hardwood finish, the best of plumbing, gas ranges, etc.; will contain twenty-four apartments of two, three and four rooms each.

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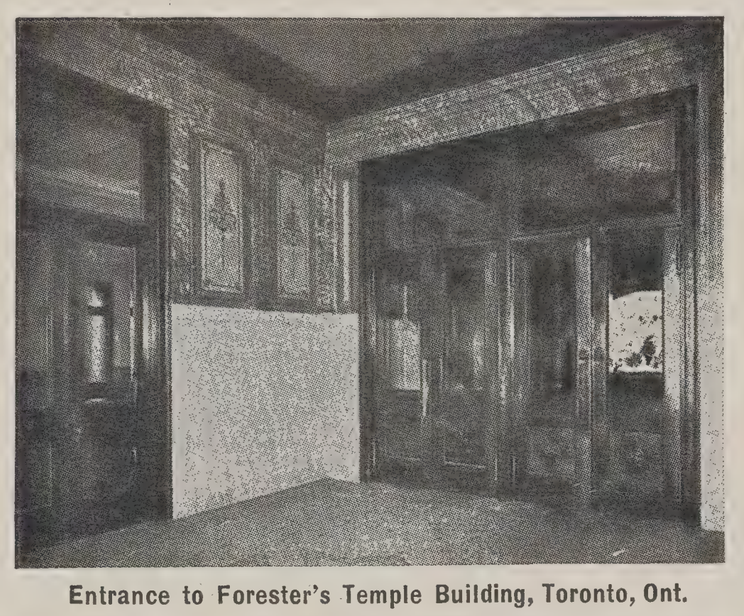

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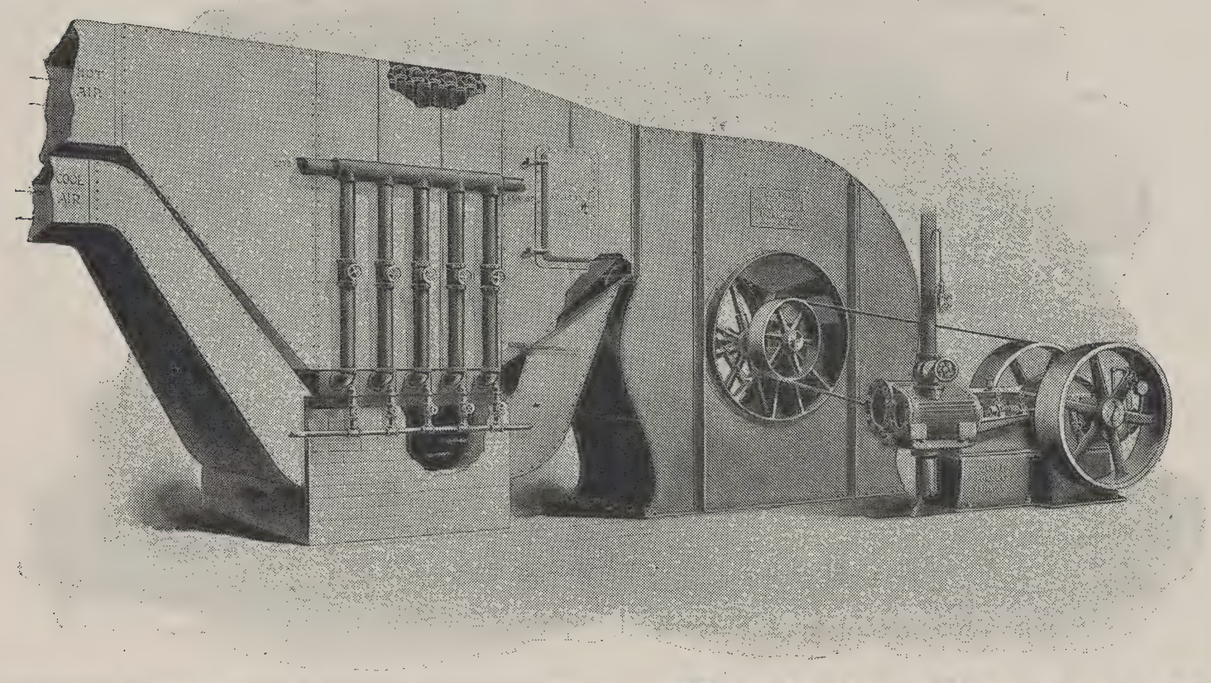

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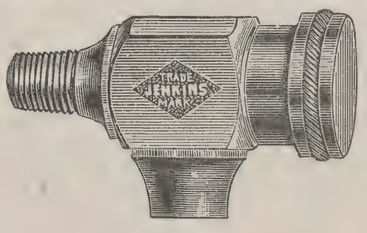

with Drip-pipe Connections insure perfect circulation. You are not annoyed with escaping steam or dripping of water. They are stamped with our trade-mark.

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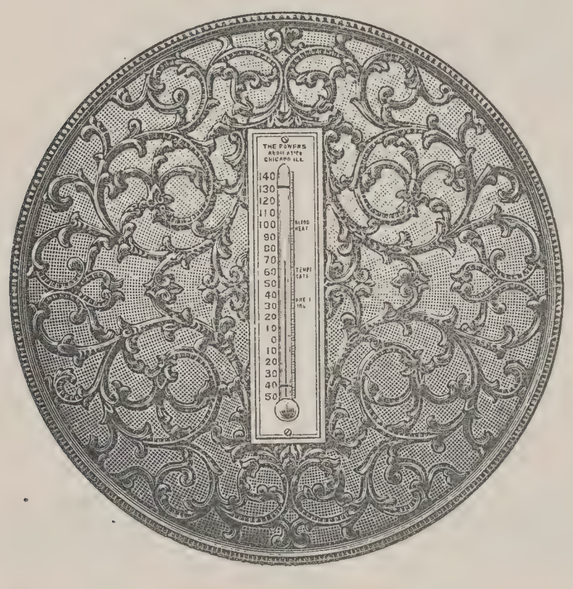

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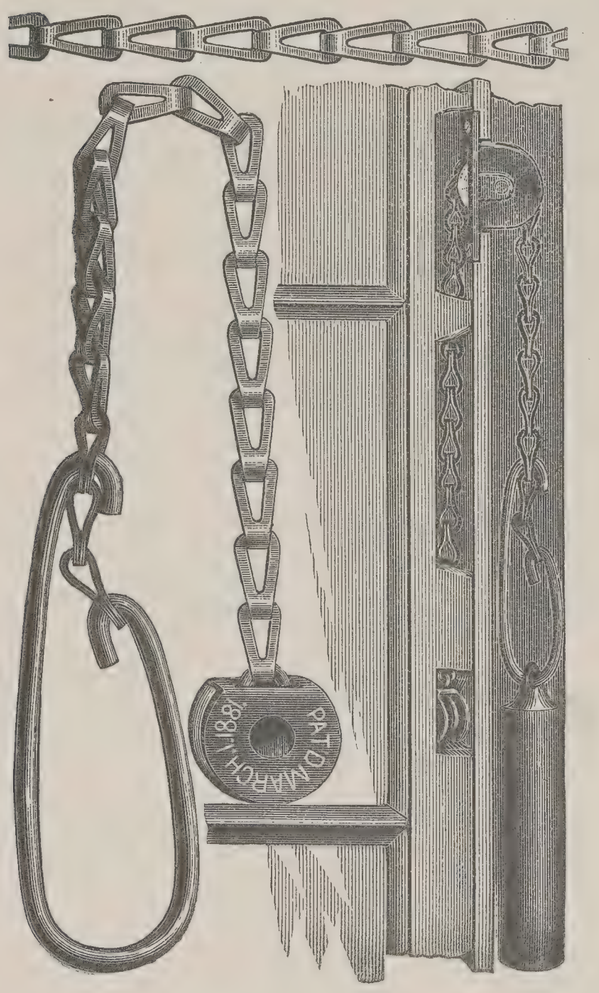

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The Bronze costs 40 per cent more than any other Sash Chain metal.

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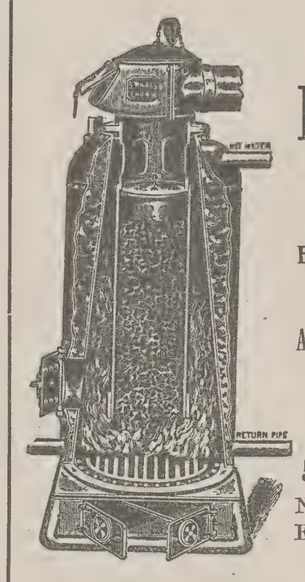

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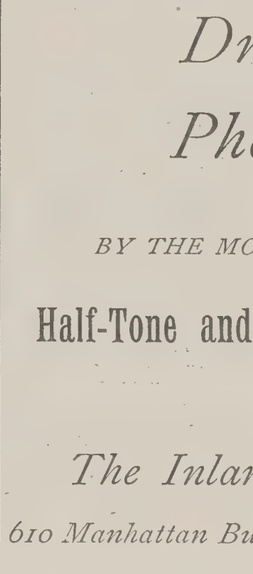

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THE INLAND ARCHITECT AND NEWS RECORD

Vol. XXXII. ADVERTISERS' TRADE SUPPLEMENT. No. 4

Valuable Publications Free.

Any architect can secure valuable books of reference without cost by sending for the catalogues of materials, etc., noticed from month to month in these columns. Large sums are spent on these catalogues, and they contain much practical information. Many are art productions. They may be obtained free on application to those issuing them. In writing please mention THE INLAND ARCHITECT, and oblige the journal and the dealer.

REQUESTS FOR CATALOGUES AND SAMPLES.

Those wishing catalogues and samples sent them by dealers in general may have their names inserted under this heading free of charge. The only recompense desired is that the dealers who send catalogues to these addresses give THE INLAND ARCHITECT due credit for business benefits that result.

TURGEON & LAFRENIERE, Architects, Room 10, No. 55 St. Francis Xavier Street, Montreal, Canada.

J. E R. CARPENTER, Architect, Columbia Bldg, Norfolk, Virginia.

H. NIEBERDING, Civil Engineer and Architect, 158 East Second South street, Salt Lake City, Utah.

W. ARTHUR THOMAS, 1211 Carnegie building, Pittsburg, Pennsylvania.

FREDERIC WILLIAM STRIEBINGER, Architect, New England building, Room 1215, Cleveland, Ohio.

GEORGE LOHMAN, Architect, 222 Houseman building, Grand Rapids, Michigan.

TIME-TRIED ROOFING TIN.

The attention of our readers is called to the advertisement of N. & G. Taylor Company, Philadelphia, manufacturers of the "Taylor Old Style" brand of roofing tin. Their trade-mark of the target and arrow is quite familiar to our readers; each sheet is stamped, or embossed, with this trade-mark; the thickness IC or IX; the brand "Old Style," and the name of the manufacturers — N. & G. Taylor Company, Philadelphia. This is done for the protection of architects, roofers, property owners, etc. Messrs. N. & G. Taylor Company claim they were the originators of the idea, and that they were the first to put into practice the stamping of sheets of roofing tin with the name of the brand and the thickness. They have handled this kind of tin for the past sixty-eight years, and claim it is the heaviest coated plate made, and manufactured entirely by the palm oil process. No rolls or machinery are used, each sheet being dipped and redipped by hand labor in open pots of metal of different degrees of temperature. It has other merits which our limited space will not allow us to describe, but which entitle the brand to the confidence of the trade. This firm can point to roofs in the old parts of Philadelphia, covered with this same kind of tin that are just as good today as when first put on, nearly seventy years ago. They have samples in their office testifying to this fact. They have agencies in every large city from Boston to San Francisco.

THE KENNEY FLUSHOMETER SYSTEM.

We are advised by the Kenney Company, New York, that the Bourne building, now being erected on Liberty street, New York City, by the Singer Manufacturing Company, will be equipped with the Kenney Flushometer system — an improved method of flushing water closets — and the contract was only secured upon the superior merits of the flushometer. This ingenious appliance takes the place of the ordinary individual overhead flush tank, one tank doing the work for all. It is practically noiseless in operation and requires no room other than that necessary for the usual seat and bowl. Architects and plumbers universally recommend it for its sanitary virtues and the facilities which it affords for light and ventilation in situations where it is installed. Many prominent business buildings are already equipped with the Kenney Flushometer system, among others in New York City being the Bowling Green building, Standard Oil building, Hudson building and the Produce Exchange.

"HELPS IN BRAZING."

The Dixon Crucible Company, of Jersey City, New Jersey, has published a little pamphlet with this heading. It treats incidentally of brazing graphite, the application of which to bicycle tubes prevents the adherence of the spelter and so effects a saving in labor by making unnecessary the filing which is otherwise needful. The pamphlet, however, especially treats of the process of brazing by the dipping method, or "liquid brazing," as it is called. The brazing crucible is described, together with instruction and caution in regard to its use. Instructions are given how to build and set the necessary furnace, time required for brazing, etc.

In regard to the economy of liquid brazing as against the old-time fire brazing, the following is quoted from a well-known bicycle manufacturer:

"We have been using the process of liquid brazing all this season, but at first found some difficulty in keeping the spelter at the proper temperature. We built several furnaces before we succeeded in getting one entirely successful. The one we have now in operation enables us to do as much work with one man and a boy as we were able to do before with five to seven men, and the results are much more satisfactory. We figure that we effect a saving of $20 per day every day we run the new furnace. Besides requiring fewer workmen, we use only about 125 pounds of hard coal in a day's run, which is quite a contrast to the expense we were under with the old gas furnace, when our gas bills amounted to $250 per month. With the new process one man and a boy can turn out seventy-five machines in a run of seven hours."

This pamphlet is of interest to all bicycle manufacturers and others who do brazing. It is sent free of charge.

TRADE NOTES.

THE Powers Regulator Company have installed their system of automatic temperature control in the new Studebaker Fine Arts building, Michigan avenue, Chicago.

THE Powers Regulator Company, of Chicago, has been awarded contracts for automatic temperature regulation in the new Worcester County Courthouse, at Worcester, Massachusetts, also the Lancaster Insane Asylum, at Lancaster, Pennsylvania.

THE Philadelphia Board of Health, after a thorough investigation, has amended the building laws so as to permit the installation of the Kenney system, by which one tank is used to supply one or more closets instead of individual tanks, as was formerly required.

THE War Department has ordered the installation of sixty-three Kenney Flushometers in the transport Mohawk, now being overhauled at the Bath (Me.) Iron Works. The Navy Department has also given the Kenney Company a second order for Flushometers, to be used in their buildings at Washington, D. C.

THE Buffalo Forge Company's engine "folder" which has just been issued is intended to illustrate their latest improved types of horizontal and vertical automatic high-speed center-crank engines running in oil. The prominent features brought out in the same are the new arrangement of the engine bed, the new method of oiling main bearings, also device for keeping the oil cool. This device consists, in short, of a plate so placed as to keep the splashing oil from coming in contact with the cylinder. On each side of the lower crosshead guide there is a deep groove for the purpose of returning the oil to the crank-pit.

THERE could be no better indication of the revival of business activity among the textile mills of this country than by the number of orders recently placed for the equipment of new buildings. The Buffalo Forge Company, Buffalo, New York, report a number of such sales, among the most recent being an outfit for the Sayles Bleacheries, Saylesville, Rhode Island, and a complete heating and ventilating outfit for the Fashion Knitting Mills, Arcade, New York. They have also received a commission to build the induced-draft apparatus for the power plant of the Howland Paper Company, Sandy Hill, New York, involving the use of two large steel-plate steam fans with engines direct connected to the fans, which are equipped with water-cooling bearings.

SOME years ago Simpson Brothers Company, of Chamber of Commerce building, Chicago, commenced laying walks, driveways, rock asphalt floors and pavements. Their aim was to make nothing but the best. In this they have succeeded, and the testimonials of hundreds of users of their cement floors and walks are now the most convincing proof that the goods and work done years ago were, as now, all that was represented. Commendations that count are testimonials from actual users of an article after years of practice and satisfactory test. Many testimonials contain expressions like the following from men in every grade of life: "I can say only words of praise for you and your goods. The work you did for me has been very satisfactory, and its condition is as well preserved as when first put in." Give them an order and you will be satisfied. Catalogue and prices free.

RAILROAD NOTES.

THE Chicago & Alton Railway has put in service a new palatial vestibule train to California, called the "Pacific Coast Limited." The equipment consists of a composite car, a compartment and dining car, and sleeping coaches. As a summer route for winter travel this will be the most luxurious and picturesque route to the Coast.

GATES AJAR ON THE "ALTON."—ABOLITION OF CAR GATE SYSTEM AND WITHDRAWAL OF CAR GATEMEN.— General Passenger Agent Charlton, of the Chicago & Alton Railroad, gave the following statement, September 28, 1898, to the press, on the subject of withdrawal of the car gate system: The Chicago & Alton placed gates on its passenger cars commencing June 1, 1893, making it necessary for all passengers to show their tickets to be canceled for transportation before boarding the trains. The object of the car gate system was the protection of passenger revenue, protection against accident, and securing that passengers boarded right trains and were provided with proper transportation. The new system did everything it was expected to do. Passenger revenue, especially on short distance travel, was greatly increased. There has not been one single case of accident on car gated trains since the system was adopted, nor has there been a single case of passengers boarding the wrong train. The car gate system on this line has been more effective and less expensive than the depot gate system generally used in all large cities throughout the country. Our customers, however, are dissatisfied with it, and in deference to their views we have decided to abolish it. Commencing October 1, car gates will be withdrawn, and passengers will board our trains without first having their tickets canceled by gatemen.

GEO. H. INGRAHAM, Architect, BOSTON.

Any painter can mix a thin paint and call it stain.

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are made from pigments ground as fine as tube colors, and only pigments which are absolutely transparent are used. These are the only stains the tannic acid of the redwood and cedar shingle will not affect.

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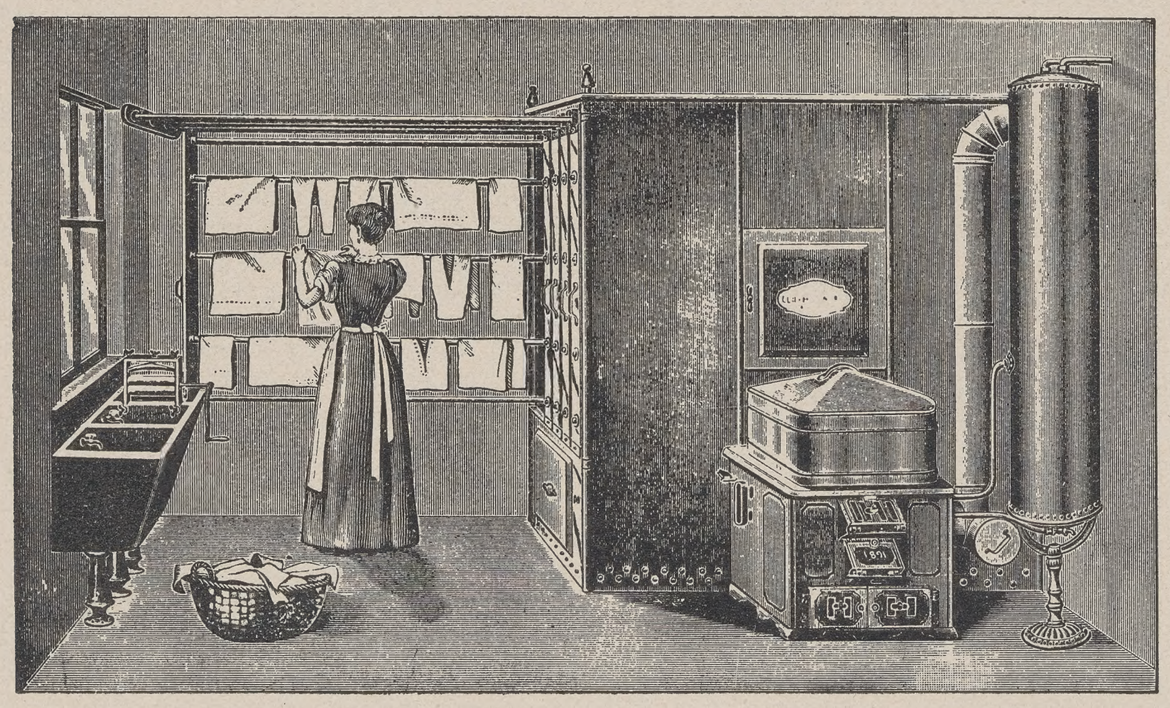

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Via Big Four and C. & O. Routes.

TOURIST RATES IN EFFECT.

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MAKE ALL COLORS, SHAPES AND KINDS OF

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Bricks that are WHITE and remain so.

No material for building secures such chaste and beautiful effects.

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White Enameled Bricks have their proper uses, but are not suitable for exterior walls.

The Hydraulic-Press Brick Co. makes bricks with an impervious coated dead finish white face, which will not absorb moisture, and is thus kept washed continuously clean by the action of the elements.

Send for samples and prices.

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Skidmore's Patent Adjustable Window Balcony

and Simkins' Patent Window-Cleaners' Safety Belt

(For Cleaning the Outside of Windows of High Buildings),

The very best and the cheapest devices for this purpose.
Send for circulars and estimates.

NOTICE OUR NEW LOCATION. Our stores are 180 feet deep on Randolph Street and 80 feet on State Street. We occupy six floors with every facility for showing and handling goods.

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Telephone, Express 551 and 554.

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SAMSON SPOT CORD

You can tell at a glance that no other Sash Cord is substituted. It is warranted to be of the best cotton stock, smooth finish and perfect braid.

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Dried Linseed Oil

Is permeable to moisture.

Experiments made by Dr. Dudley, chief chemist of the Pennsylvania R. R., have proved this.

Stands to reason, then, that

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Durable Metal Coating will

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ITS PRODUCTS EMBRACE

LOCKS of every kind and for every use, the most complex and expensive, the simplest and cheapest, and every intermediate grade.

BUILDERS' HARDWARE of every kind and quality; and a vast number of special articles used in buildings of every kind.

ART METAL WORK in every school of ornament, in every metal and finish, and in greater variety of design than by any other maker in the world.

A Handsome Exhibit Room is provided in each of the Company's local offices. It contains samples of its products, and is intended for the use of Architects and their clients in the selection of locks and metal work. Ladies are especially invited to make use of these facilities.

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MORE DESIRABLE THAN WOODEN BOATS. WILL LAST A LIFETIME.
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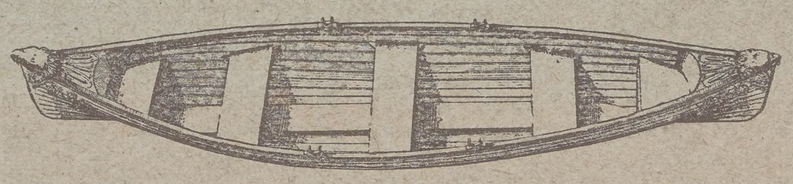

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15 feet long, 42-inch beam.

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